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**Department of Defense
Fiscal Year (FY) 2022 Budget Estimates**

May 2021



Air Force

Justification Book Volume 1 of 1

Procurement of Ammunition, Air Force

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Air Force • Budget Estimates FY 2022 • Procurement

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Appropriation Language
Fiscal Year (FY) 2022 Budget Estimates
Procurement of Ammunition, Air Force

For construction, procurement, production, and modification of ammunition and accessories therefor; specialized equipment and training devices; expansion of public and private plants, including ammunition facilities authorized by section 2854 of title 10, United States Code, and the land necessary therefor, for the foregoing purposes, and such lands and interests therein, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway; other expenses necessary for the foregoing purposes, and overseas contingency operations, \$795,168,000 to remain available for obligation until September 30, 2024.

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Exhibit footnotes for FY 2020 actuals and FY 2021 Enacted:

- a. FY 2020 Actuals: **“Includes Division A, Title IX and X of the Consolidated Appropriations Act, 2020 (P.L. 116-93), Division F, Title IV and V from the Further Consolidated Appropriations Act, 2020 (P.L. 116-94) and the Coronavirus Aid, Relief, and Economic Security Act (P.L. 116-136).”**
- b. FY 2021 Enacted (for every appropriation except O&M, Army, O&M, Navy, and O&M, AF): **“Includes Division C, Title IX and Division J, Title IV of the Consolidated Appropriations Act, 2021 (P.L. 116-260).”**
- c. FY 2021 Enacted (for O&M, Army, O&M, Navy, and O&M, AF): “Includes Division C, Title IX and Division J, Title IV of the Consolidated Appropriations Act, 2021 (P.L. 116-260) and funds provided by the Congress as OCO to Base Requirements in O&M Army, O&M Navy, and O&M AF.”

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Department of the Air Force
 FY 2022 President's Budget
 Exhibit P-1 FY 2022 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

05 May 2021

Appropriation -----	FY 2020 Actual*	FY 2021 Enacted**	FY 2022 Request
-----	-----	-----	-----
Aircraft Procurement, Air Force	17,550,262	19,985,491	15,727,669
Missile Procurement, Air Force	2,777,558	2,365,953	2,669,811
Space Procurement, Air Force	2,353,383		
Procurement of Ammunition, Air Force	2,535,419	1,336,461	795,168
Procurement, Space Force		2,310,994	2,766,854
Other Procurement, Air Force	25,199,603	23,796,987	25,251,137
Total Department of the Air Force	50,416,225	49,795,886	47,210,639

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Department of the Air Force
 FY 2022 President's Budget
 Exhibit P-1 FY 2022 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

05 May 2021

Appropriation: Procurement of Ammunition, Air Force

Budget Activity -----	FY 2020 Actual*	FY 2021 Enacted**	FY 2022 Request
-----	-----	-----	-----
01. Ammunition	2,491,828	1,316,319	782,825
02. Weapons	43,591	20,142	12,343
Total Procurement of Ammunition, Air Force	2,535,419	1,336,461	795,168

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Department of the Air Force
 FY 2022 President's Budget
 Exhibit P-1 FY 2022 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

05 May 2021

Appropriation: 3011F Procurement of Ammunition, Air Force

Line No	Item Nomenclature	Ident Code	FY 2020 Actual*		FY 2021 Enacted**		FY 2022 Request		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Ammunition									

Rockets									
1	Rockets	A		207,928		34,451		36,597	U
Cartridges									
2	Cartridges	A		193,048		157,799		169,163	U
Bombs									
3	Practice Bombs	A		29,313		34,313		48,745	U
4	General Purpose Bombs	A		621,732		369,566		176,565	U
5	Massive Ordnance Penetrator (MOP)							15,500	U
6	Joint Direct Attack Munition	A	24794	1,034,224	16800	459,712	1919	124,102	U
7	B-61	A	593	(55,531)		(35,634)		(2,709)	U
	Less: Advance Procurement (PY)			(242)					U
				-----		-----		-----	
				55,773		35,634		2,709	
Other Items									
8	Cad/Pad	A		56,482		47,830		47,210	U
9	Explosive Ordnance Disposal (EOD)	A		6,182		6,232		6,151	U
10	Spares And Repair Parts	A		533		542		535	U
11	Modifications	A		1,291		1,310		292	U
12	Items Less Than \$5,000,000	A		1,720		4,753		9,164	U
Flares									
13	Flares	A		139,388		61,259		95,297	U

P-122BAS: FY 2022 President's Budget (Total Base Published Version), as of May 5, 2021 at 14:47:22

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Department of the Air Force
 FY 2022 President's Budget
 Exhibit P-1 FY 2022 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

05 May 2021

Appropriation: 3011F Procurement of Ammunition, Air Force

Line No	Item Nomenclature	Ident Code	FY 2020 Actual*		FY 2021 Enacted**		FY 2022 Request		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Fuzes									
14	Fuzes	A		144,214		102,918		50,795	U
Total Ammunition				2,491,828		1,316,319		782,825	
Budget Activity 02: Weapons									

Small Arms									
15	Small Arms	A		43,591		20,142		12,343	U
Total Weapons				43,591		20,142		12,343	
Total Procurement of Ammunition, Air Force				2,535,419		1,336,461		795,168	

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Line Item Table of Contents (by Appropriation then Line Number)

Appropriation 3011F: Procurement of Ammunition, Air Force

Line #	BA	BSA	Line Item Number	Line Item Title	Page
1	01	11	351010	Rockets.....	Volume 1 - 1
2	01	12	352010	Cartridges.....	Volume 1 - 9
3	01	13	353010	Practice Bombs.....	Volume 1 - 25
4	01	13	353020	General Purpose Bombs.....	Volume 1 - 29
5	01	13	353190	Massive Ordnance Penetrator (MOP).....	Volume 1 - 43
6	01	13	353620	Joint Direct Attack Munition.....	Volume 1 - 47
7	01	13	354040	B-61.....	Volume 1 - 57
8	01	15	355100	Cad/Pad.....	Volume 1 - 67
9	01	15	355450	Explosive Ordnance Disposal (EOD).....	Volume 1 - 71
10	01	15	355900	Spares And Repair Parts.....	Volume 1 - 77
11	01	15	355970	Modifications.....	Volume 1 - 79
12	01	15	355990	Items Less Than \$5,000,000.....	Volume 1 - 81
13	01	16	356010	Flares.....	Volume 1 - 85
14	01	18	356120	FUZES.....	Volume 1 - 103

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Appropriation 3011F: Procurement of Ammunition, Air Force

Line #	BA	BSA	Line Item Number	Line Item Title	Page
15	02	01	357010	Small Arms.....	Volume 1 - 109

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Air Force • Budget Estimates FY 2022 • Procurement

Line Item Table of Contents (Alphabetically by Line Item Title)

Line Item Title	Line Item Number	Line #	BA	BSA	Page
B-61	354040	7	01	13.....	Volume 1 - 57
Cad/Pad	355100	8	01	15.....	Volume 1 - 67
Cartridges	352010	2	01	12.....	Volume 1 - 9
Explosive Ordnance Disposal (EOD)	355450	9	01	15.....	Volume 1 - 71
FUZES	356120	14	01	18.....	Volume 1 - 103
Flares	356010	13	01	16.....	Volume 1 - 85
General Purpose Bombs	353020	4	01	13.....	Volume 1 - 29
Items Less Than \$5,000,000	355990	12	01	15.....	Volume 1 - 81
Joint Direct Attack Munition	353620	6	01	13.....	Volume 1 - 47
Massive Ordnance Penetrator (MOP)	353190	5	01	13.....	Volume 1 - 43
Modifications	355970	11	01	15.....	Volume 1 - 79
Practice Bombs	353010	3	01	13.....	Volume 1 - 25
Rockets	351010	1	01	11.....	Volume 1 - 1
Small Arms	357010	15	02	01.....	Volume 1 - 109
Spares And Repair Parts	355900	10	01	15.....	Volume 1 - 77

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ACRONYMS

GENERAL ACRONYMS

A&AS	- Advisory & Assistance Services
ABIDES	- Automated Budget Interactive Data Environment System
ACAT	- Acquisition Category
ACTD	- Advanced Concept Technology Demonstration
AGM	- Air-to-Ground Missile
AIM	- Air Intercept Missile
AIS	- Avionics Intermediate Shop
ACMI	- Aircraft Combat Maneuvering Instrumentation
AMRAAM	- Advanced Medium-Range Air-to-Air Missile
APPN	- Appropriation
ATD	- Advanced Technology Development
BA	- Budget Activity
BES	- Budget Estimate Submission
BY	- Budget Year
C3	- Command, Control, and Communication System
CFE	- Contractor Furnished Equipment
CONOPS	- Concept of Operation
CONUS	- Continental United States
CPMS	- Comprehensive Power Management System
CPT	- Cockpit Procedures Trainer
CRA	- Continuing Resolution Authority
CTS	- Countermeasures Test Set
CY	- Current Year
ECCM	- Electronic Counter Counter-Measures
ECM	- Electronic Counter Measures
ECO	- Engineering Change Orders
EOQ	- Economic Order Quantity
ECP	- Engineering Change Proposal
EPA	- Economic Price Adjustment
EW	- Electronic Warfare
EWAIISP	- Electronic Warfare Avionics Integration Support Facility
FLIR	- Forward Looking Infra Red

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FOT&E	- Follow-on Test and Evaluation
FOC	- Fully Operational Capability
FLTS	- Flight Line Test Set
FPIF	- Fixed Price Incentive Firm
FPIS	- Fixed Price Incentive Fee, Successive Targets
FY	- Fiscal Year
GANS	- Global Access Navigation & Safety
GATM	- Global Air Traffic Management
GFE	- Government Furnished Equipment
GFP	- Government Furnished Property
GPS	- Global Positioning System
GSE	- Ground Support Equipment
ICS	- Interim Contractor Support
IOC	- Initial Operating Capability
IT	- Information Technology
JUON	- Joint Urgent Operational Need
MAIS	- Major Automated Information System Program
MDAP	- Major Defense Acquisition Program
METS	- Mobile Electronic Test Stations
MYP	- Multiyear Procurement
NAVWAR	- Navigation Warfare
NMC Rate	- Not Mission Capable Rate
OCO	- Overseas Contingency Operations
OT&E	- Operational Test and Evaluation
OWRM	- Other War Reserve Material
PAGEL	- Priced Aerospace Ground Equipment List
PB	- President's Budget
PBR	- Program Budget Review
PMA	- Program Management Administration
PMC	- Procurement Method Code
PNO	- Acquisition Program Number (MDAP Codes)
PR	- Purchase Request
PRCP	- Program Resource Collection Process
PTT	- Part Task Trainer
PY	- Prior Year
R&M	- Reliability and Maintainability

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RAA	- Rapid Acquisition Authority
RDT&E	- Research, Development, Test and Evaluation
RWR	- Radar Warning Receiver
ROM	- Rough Order of Magnitude
SS	- Sole Source
SOF	- Special Operation Force
TAF	- Tactical Air Force
TCAS	- Traffic Collision Alert and Avoidance System
TEWS	- Tactical Electronic Warfare System
TISS	- TEWS Intermediate Support System
TOA	- Total Obligation Authority
WCF	- Working Capital Fund
WRM	- War Reserve Material
WST	- Weapon System Trainer
UAV	- Unmanned Aerial Vehicle
XML	- Extensible Markup Language

BASE / ORGANIZATIONAL ACRONYMS

ACC	- Air Combat Command
AETC	- Air Education & Training Command
AFCAO	- Air Force Computer Acquisition Office
AFCESA	- Air Force Civil Engineering Support Agency
AFCIC	- AF Communications & Information Center
AFCSC	- Air Force Cryptologic Service Center
AFESC	- Air Force Engineering Services Center
AFGWC	- Air Force Global Weather Central
AFIT	- Air Force Institute of Technology
AFLCMC	- Air Force Life Cycle Management Center
AFMC	- Air Force Materiel Command
AFMETCAL	- Air Force Metrology and Calibration Office
AFMLO	- Air Force Medical Logistics Office
AFOSI	- Air Force Office of Special Investigation
AFOTEC	- Air Force Operational Test & Evaluation Center
AFPC	- Air Force Personnel Center
AFPSL	- AF Primary Standards Lab

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AFR	- Air Force Reserve
AFSOC	- AF Special Operations Command
AFSPC	- Air Force Space Command
AIA	- Air Intelligence Agency
ALC	- Air Logistics Center
AMC	- Air Mobility Command
ANG	- Air National Guard
ASC	- Aeronautical Systems Center
AETC	- Air Education Training Command
AU	- Air University
AWS	- Air Weather Service
CIA	- Central Intelligence Agency
DGSC	- Defense General Support Center
DLA	- Defense Logistics Center
DOE	- Department of Energy
DPSC	- Defense Personnel Support Center
DSCC	- Defense Supply Center, Columbus
DTIC	- Defense Technical Information Center
ER	- Eastern Range
ESC	- Electronic Systems Center
FAA	- Federal Aviation Agency
FBI	- Federal Bureau of Investigation
GSA	- General Services Administration
JCS	- Joint Chiefs of Staff
NATO	- North Atlantic Treaty Organization
OSD	- Office of the Secretary of Defense
PACAF	- Pacific Air Forces
USAF	- United States Air Force
USAFA	- United States Air Force Academy
USAFE	- United States Air Force Europe
USCENTCOM	- United States Central Command
USEUCOM	- United States European Command
USMC	- United States Marine Corps
USSTRATCOM	- United States Strategic Command
WP AFB	- Wright-Patterson AFB, OH

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CONTRACT METHOD / TYPE ACRONYMS

C	- Competitive
BA	- Basic Agreement
BOA	- Basic Ordering Agreement
BPA	- Blanket Purchasing Agreement
CS	- Cost Sharing
IDDQ	- Indefinite Delivery, Definite Quantity
IDIQ	- Indefinite Delivery, Indefinite Quantity
IDRT	- Indefinite Delivery, Requirements
Letter	- Letter
LH	- Labor-hour
MIPR	- Military Interdepartmental Purchase Request
MIPR-C	- Military Interdepartmental Purchase Request - Competitive
MIPR-OPT	- Military Interdepartmental Purchase Request - Option
MIPR-OTH	- Military Interdepartmental Purchase Request – Other
MIPR-SS	- Military Interdepartmental Purchase Request - Sole Source
OPT	- Option
OTH	- Other
PO	- Project Order
REQN	- Requisition
SS	- Sole Source
T&M	- Time and Materials
UCA	- Undefinitized Contract Action
WP	- Work Project

CONTRACTED BY ACRONYMS

11 WING	- 11th Support Wing, Washington, DC
ACC	- Air Combat Command, Langley AFB, VA
AEDC	- Arnold Engineering Development Center, Arnold AFB, TN
AAC	- Air Armament Center, Eglin AFB, FL
AEDC	- Arnold Engineering Development Center, Arnold AFB, TN
AETC	- Air Education and Training Command, Randolph AFB, TX
AFCIC	- Air Force Communications and Information Center, Washington, DC
AFCESA	- Air Force Civil Engineering Support Agency, Tyndall AFB, FL
AFFTC	- Air Force Flight Test Center, Edwards AFB, CA

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AFLCMC	- Air Force Life Cycle Management Center, Wright-Patterson AFB, OH
AFMC	- Air Force Materiel Command, Wright-Patterson AFB, OH
AFMETCAL	- Air Force Metrology and Calibration Office, Heath, Ohio
AFMLO	- Air Force Medical Logistics Office, Ft Detrick, MD
AIA	- Air Intelligence Agency, Kelly AFB, TX
AMC	- Air Mobility Command, Scott AFB, IL
ASC	- Aeronautical Systems Center, Wright-Patterson AFB, OH & Eglin AFB, FL
AFWA	- Air Force Weather Agency, Offutt AFB, NE
DGSC	- Defense General Support Center, Richmond, VA
DPSC	- Defense Personnel Support Center, Philadelphia, PA
ER	- Eastern Range, Patrick AFB, FL
ESC	- Electronic Systems Center, Hanscom AFB, MA
HSC	- Human Services Center, Brook AFB, TX
OC-ALC	- Oklahoma City Air Logistics Center, Tinker AFB, OK
OO-ALC	- Ogden Air Logistics Center, Hill AFB, UT
SMC	- Space & Missile Systems Center, Los Angeles AFB, CA
US STRATCOM	- US Strategic Command, Offutt AFB, NE
WACC	- Washington Area Contracting Center, Washington DC
WR	- Western Range, Vandenberg AFB, CA
WR-ALC	- Warner-Robins Air Logistics Center, Robins AFB, GA
AFSPC	- Air Force Space Command, Peterson AFB, CO
HQ ANG	- Headquarters, Air National Guard, Washington, DC
USAFE	- United States Air Force Europe, Ramstein AB, GE
USAFA	- United States Air Force Academy, Colorado Springs, CO

IDENTIFICATION CODES

Code "A"	- Line items of material which have been approved for Air Force service use.
Code "B"	- Line items of material that have not been approved for Service use
OBAN	- Operating Budget Account Number, 2-digit code for unit allocated funds

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 11: Rockets	P-1 Line Item Number / Title: 351010 / Rockets
--	--

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
--	---	--

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	207.928	34.451	36.597	-	36.597	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	207.928	34.451	36.597	-	36.597	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	207.928	34.451	36.597	-	36.597	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

- FY2020 funding totals include \$84.960M appropriated for Overseas Contingency Operations.
- FY2021 funding totals include \$19.489M appropriated for Overseas Contingency Operations.
- FY2022 funding totals include \$15.079M requested for Direct War and/or Enduring Requirements.

- The WGU-59B Advanced Precision Kill Weapon System II (APKWS II) is employed on the A-10 and F-16 aircraft. APKWS II AUR is composed of a fuse, M151/M282 warhead, WGU-59B guidance and control section, and a MK66 rocket motor launched from a LAU-131A/A or LAU-68F/A rocket launcher. The weapon is effective in any terrain, including, but not limited to, urban, desert and mountainous. It provides an ability to engage and destroy moving and transient targets. APKWS II offers greater precision, reduced collateral damage, and increased standoff range to enhance crew survivability.

- The APKWS II guidance section is a mid-body, semi-active laser guidance and control kit that converts an unguided 2.75 inch rocket into a precision laser-guided rocket. APKWS II guidance sections are compatible with new and existing inventories of rocket motors, warheads, and launchers. The guidance sections are procured through Department of the Navy PMA-242 at Patuxent River Naval Air Station.

- The Air Force uses the 2.75 inch diameter rocket system to support various missions including low collateral damage engagements, target marking, and battle field illumination. The system can be employed from both high and low speed aircraft. The 2.75 inch diameter rocket motor (HA07) is a single stage, solid grain rocket motor used to propel unguided and guided payloads to their targets. The HA07 is able to carry the WGU-59B (HB24) Advanced Precision Kill Weapon System II (APKWS II) guidance section, and the following payloads: illuminating flare warhead (H812), infrared (IR) illuminating flare warhead (HA06/HB37), Signal Practice warhead (H872), White Phosphorus (WP) warhead (H855), M151 High Explosive warheads (H842 and H843), and M282A2 (HB45) Penetrator warhead. The 2.75 inch rockets are launched from reusable pods, the LAU-131A (H149) and LAU-131A/A (HA91) extended length launcher, carried on A-10 and F-16 aircraft. These items are procured by AFLCMC/EBH through the U.S. Army Missile Command, Tactical Aviation and Ground Munitions (TAGM), PEO Missile and Space at Redstone Arsenal, Alabama, and Department of the Navy PMA-242 at Patuxent River Naval Air Station and Naval Surface Warfare Center Indian Head Explosive Ordnance Disposal Technology Division (IHEODTD) at Indian Head, MD.

- The M151 (H843) and M282 Multi-Purpose Penetrator (MPP) warheads are low-cost, low-collateral damage capabilities. The M282 MPP warhead provides aircrew and ground commanders greatly enhanced weaponeering options to engage targets protected by urban and cave environments. Equipment such as MKIII, MKIV, and AN/USM-715 testers, peculiar support equipment, clamping and torquing fixtures and tools, or other assets that pertain to assembling and testing APKWS or unguided rockets are also procured.

- The Illuminating Flare (H812) and IR illuminating flare (HA06/HB37) warheads provide forward air control aircraft with the target locations from a standoff distance in a hostile environment.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 11: Rockets		P-1 Line Item Number / Title: 351010 / Rockets
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>- The Signal Practice (H872) warhead provides a training capability.</p> <p>- The WP (H855) warhead provides forward air control aircraft with target locations from a standoff distance in a hostile environment.</p> <p>- The LAU-131A/A (HA91) and the LAU-68F/A (HA94) are seven tube (capacity) extended length launchers that can accommodate both legacy length 2.75 inch diameter rockets and the extended length of the APKWS II rockets. The extended length launchers are designed to accommodate the guidance and control section within the launcher.</p> <p>- Items Less Than Five Million Dollars: All items have an annual procurement value of less than 5,000,000 and are Code A. These items are procured by AFLCMC/EBH through the U.S. Army Missile Command, Tactical Air to Ground Munitions (TAGM), PEO Missiles and Space at Redstone Arsenal Alabama, and/or the U.S. Navy PMA-242 at Patuxent River Naval Air Station. In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.</p> <p>Funding may be used to address production Diminishing Manufacturing Sources and Material Shortages (DMSMS) and obsolescence issues through studies, bridge buys, life of type buys, supplier/parts replacement, to include electronic components used commercially and in short supply; and qualification activities to preserve future production capabilities and capacities.</p> <p>Note: Procurement quantities can change based on negotiated options/pricing bands and available funding, in accordance with Title 10, U.S. Code Section 2308 BUY-TO-BUDGET ACQUISITION.</p> <p>These funds may also procure inventoried items which may not be procured on an annual basis and could be required on an emerging basis. Variations to cover critical shortfalls to inventory objectives as well as actual and planned expenditures will be addressed during execution year.</p> <p>Funding for this exhibit is contained in PE 0207599F and PE 0208030F.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 11: Rockets **P-1 Line Item Number / Title:** 351010 / Rockets

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	(H812) WHD ILLUM M257				- / -	- / 0.000	- / 1.000	- / 0.999	- / -	- / 0.999
P-40a	(H855) WHD 2.75 RKT SMK M156 PD M427				- / -	- / 0.000	- / 0.000	- / 2.500	- / -	- / 2.500
P-40a	(HA06) WARHEAD, 2.75 ILLUM				- / -	- / 0.000	- / 1.501	- / 1.498	- / -	- / 1.498
P-5	APKWS		A		- / -	- / 207.928	- / 31.950	- / 31.600	- / 0.000	- / 31.600
P-40	Total Gross/Weapon System Cost				- / -	- / 207.928	- / 34.451	- / 36.597	- / -	- / 36.597

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY2022 funding totals include \$15.079M requested for Direct War and/or Enduring Requirements. Funding supports the purchase of rockets, launchers, warheads, and guidance sections to constitute the APKWS II all-up-round (AUR). Additionally, funding supports training and support equipment required for APKWS.

The Air Force procures munitions to maintain appropriate operational quantity levels, as well as War Reserve Materiel (WRM) munitions and test and training stockpiles. Active, Guard and Reserve components draw from the WRM stockpiles as required and receive test and training allocations annually based on current-year requirements.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 11 **P-1 Line Item Number / Title:** 351010 / Rockets **Aggregated Items Title:** (H812) WHD ILLUM M257

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
(H812) WHD ILLUM M257	A		-	-	-	-	-	0.000	-	-	1.000	0.003	333	0.999	-	-	-	0.003	333	0.999
Subtotal: Uncategorized			-	-	-	-	-	0.000	-	-	1.000	-	-	0.999	-	-	-	-	-	0.999
Total			-	-	-	-	-	0.000	-	-	1.000	-	-	0.999	-	-	-	-	-	0.999

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force														Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 11						P-1 Line Item Number / Title: 351010 / Rockets						Aggregated Items Title: (H855) WHD 2.75 RKT SMK M156 PD M427							

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware																				
Warhead SMK M156 (H855)	A		-	-	-	-	-	0.000	-	-	0.000	0.008	329	2.500	-	-	-	0.008	329	2.500
Subtotal: Hardware			-	-	-	-	-	0.000	-	-	0.000	-	-	2.500	-	-	-	-	-	2.500
Total			-	-	-	-	-	0.000	-	-	0.000	-	-	2.500	-	-	-	-	-	2.500

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 11 **P-1 Line Item Number / Title:** 351010 / Rockets **Aggregated Items Title:** (HA06) WARHEAD, 2.75 ILLUM

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
(HA06) WARHEAD, 2.75 ILLUM	A		-	-	-	-	-	0.000	-	-	1.501	0.003	497	1.498	-	-	-	0.003	497	1.498
Subtotal: Uncategorized			-	-	-	-	-	0.000	-	-	1.501	-	-	1.498	-	-	-	-	-	1.498
Total			-	-	-	-	-	0.000	-	-	1.501	-	-	1.498	-	-	-	-	-	1.498

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-5, Cost Analysis: PB 2022 Air Force						Date: May 2021			
Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 11				P-1 Line Item Number / Title: 351010 / Rockets			Item Number / Title [DODIC]: APKWS		
ID Code (A=Service Ready, B=Not Service Ready) : A					MDAP/MAIS Code:				
Resource Summary				Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				-	207.928	31.950	31.600	0.000	31.600
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				-	207.928	31.950	31.600	0.000	31.600
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				-	207.928	31.950	31.600	0.000	31.600
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (\$ in Millions)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)				-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - Advanced Precision Kill Weapon System (APKWS) Cost																		
Recurring Cost																		
Guidance Section	-	-	-	0.022	5,826	126.016	0.023	1,020	23.422	0.024	512	12.272	-	-	0.000	0.024	512	12.272
(HA07) ROCKET MOTOR MK-66	-	-	-	0.001	65,000	58.237	0.001	85	0.074	0.001	15,802	13.579	-	-	-	0.001	15,802	13.579
(HA91) LAU-131A/A ROCKET LAUNCHER	-	-	-	0.007	250	1.676	0.008	250	1.925	0.010	250	2.515	-	-	-	0.010	250	2.515
Warhead M151	-	-	-	0.000	10,125	3.000	0.001	2,800	1.493	0.001	2,750	1.500	-	-	-	0.001	2,750	1.500
Warhead M282	-	-	-	0.003	5,517	14.269	0.003	1,146	2.996	-	-	0.000	-	-	-	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	203.198	-	-	29.911	-	-	29.866	-	-	0.000	-	-	29.866
<i>Subtotal: Hardware - Advanced Precision Kill Weapon System (APKWS) Cost</i>	-	-	-	-	-	203.198	-	-	29.911	-	-	29.866	-	-	0.000	-	-	29.866
Support - APKWS Cost																		
PMA Other Government Costs	-	-	-	-	-	4.730	-	-	2.039	-	-	1.734	-	-	-	-	-	1.734
<i>Subtotal: Support - APKWS Cost</i>	-	-	-	-	-	4.730	-	-	2.039	-	-	1.734	-	-	-	-	-	1.734
Gross/Weapon System Cost	-	-	-	-	-	207.928	-	-	31.950	-	-	31.600	-	-	0.000	-	-	31.600

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 12: Cartridges	P-1 Line Item Number / Title: 352010 / Cartridges
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	193.048	157.799	169.163	-	169.163	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	193.048	157.799	169.163	-	169.163	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	193.048	157.799	169.163	-	169.163	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

- FY2020 funding totals include \$52.642M appropriated for Overseas Contingency Operations.
- FY2021 funding totals include \$40.434M appropriated for Overseas Contingency Operations.
- FY2022 funding totals include \$40.741M requested for Direct War and/or Enduring Requirements.

The following Weapon System Cost Elements are represented in this P-1 line:

IMPULSE CARTRIDGES:

- BBU-35 Impulse Cartridge (MG62): Deploys countermeasure chaff and ignites flares from the aircraft dispenser for multiple aircraft. Applicable to the M206, MJU-61, MJU-66, MJU-64, MJU-71, MJU-73, MJU-75, etc. countermeasure flares and RR170 and RR188 chaff.
- BBU-36 Impulse Cartridge (MG11): Deploys countermeasure flare on multiple aircraft to protect aircraft from IR weapons. Flare applications include: MJU-7, MJU-10, MJU-40, MJU-53 AND MJU-62.
- BBU-46 Impulse Cartridge (MT40): Deploys a MJU-23 countermeasure flare on the B-1.
- BBU-48 Impulse Cartridge (SS27): Deploys countermeasure chaff on multiple aircraft to protect aircraft from radar and radar guided weapons. Chaff applications include: RR-180 and RR-196.
- BBU-59 Impulse Cartridge (WD01): Deploys a MJU-39 countermeasure flare on the F-22.
- BBU-63 Impulse Cartridge (SS44): Bomb ejection cartridge used with the BRU-44 bomb rack on the B-2.
- ARD 446 Impulse Cartridge (WB33): Weapon and store release cartridge.
- ARD 863 Impulse Cartridge (M189): Weapon and store release cartridge.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 12: Cartridges		P-1 Line Item Number / Title: 352010 / Cartridges
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>-RR-170 Chaff (LY07): RF countermeasure; dispensed by BBU-35</p> <p>-RR-180 Chaff (SY16): RF countermeasure; dispensed by BBU-48</p> <p>-RR-188 Chaff (3W37): RF countermeasure; dispensed by BBU-35</p> <p>-RR-196 Chaff (CY94): RF countermeasure; dispensed by BBU-48</p> <p>-RR-196(T-1) Chaff (NY02): RF countermeasure; dispensed by BBU-48</p> <p>-RR-198/AL: F-35 operational chaff round dispensed by CCU-145. Procurement will be through a Navy managed contract vehicle.</p> <p>-RR-199: F-35 training chaff round dispensed by CCU-145. Procurement will be through a Navy managed contract vehicle.</p> <p>-CCU-106: Government-owned weapon and stores release cartridge. This cartridge will replace the proprietary ARD 446 cartridge over the next several years. Procurement will be through an Air Force managed contract vehicle.</p> <p>-CCU-107 (MT95): Government-owned weapon and stores release cartridge. This cartridge is currently used on the KC-46 and will replace the proprietary ARD 863 cartridge over the next several years. Procurement will be through a Navy managed contract vehicle.</p> <p>-CCU-136 (WA83): Deploys towed decoy; used with AN/ALE-70(V)1</p> <p>-CCU-145 (WB24): Deploys countermeasure flares from F-35. Applicable to MJU-68 and MJU-71</p> <p>-CCU-41 (MF60): Deploys towed decoy for F-15 and B-1; used with ALE-50</p> <p>-CCU-167 (DWGY): Cutter cart for steel hoist cables on helicopters and various towed targets on multiple aircraft</p> <p>-MK2 (M190): Weapons and pylons release cartridge; tanks and special equipment; cutter cartridge.</p> <p>-MK 107 MOD 1 (M943): Used on rotary launcher for B-1, MXU-611 Fuel Tank Release mechanism and LAU-93A Phoenix Missile Launcher</p> <p>-M21 (M500): Parachute reefing line cutter on C-17</p> <p>MEDIUM CALIBER AMMO:</p> <p>-25MM Target Practice (TP), PGU-23/U (A978): 25MM PGU-23 is a target practice round used in the GAU-12/A gun systems applicable to the F-35 and AC-130U aircraft. The round is also a kinetic energy combat round used to limit collateral damage potential. Air Force procures PGU-23 through the Single Manager for Conventional Ammunition (SMCA), Department of the Army.</p> <p>-25MM Dummy Rounds, PGU-24 (A968 is a dummy round that provides gun system training, and aids in troubleshooting for the GAU-12/A gun system applicable to the F-35 and AC-130U aircraft. Air Force procures PGU-24 through Single Manager for Conventional Ammunition (SMCA), Department of the Army.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 12: Cartridges		P-1 Line Item Number / Title: 352010 / Cartridges
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>-20MM PGU-28A/B (AA22): Primary combat round, high explosive incendiary used with the M61 gun system applicable to the F-15 and F-16 aircraft. Designed for use against air-to-air and air-to-ground targets. Both the Air Force and Navy use this ammunition for combat only. Air Force procures 20MM through the Single Manager for Conventional Ammunition (SMCA), Department of the Army and engineering support from the Navy.</p> <p>-20MM TP Round PGU-27A/B (AA24): This round is used for air-to-air and air-to-ground training in the M61 aircraft gun on F-15, F-16 and F-22A aircraft. The cartridge is electrically primed and has no fuze. The projectile is a solid slug sized to match the ballistics of the 20MM combat round. 20MM is the primary ammunition used in Air Force and Navy aircraft gun systems to provide a training capability to complement the PGU-28 high explosive incendiary combat round and ensure training is consistent with combat operations. Air Force procures 20MM through the Army Single Manager for Conventional Ammunition (SMCA), Department of the Army and engineering support from the Navy.</p> <p>-20MM PGU-39 (A931): PGU-39 is a dummy round that provides gun system training, and aids in troubleshooting, as well as being utilized to verify weapon system readiness for the M61 gun system. Air Force procures 20MM through Single Manager for Conventional Ammunition (SMCA), Department of the Army and engineering support from the Navy.</p> <p>-30MM HEI PGU-13D/B Round (B104): This is a High Explosive Incendiary (HEI) round for the GAU-8/A cannon on the A-10 aircraft. It contains an explosive material for use against light armor and personnel. Air Force procures 30MM from the Single Manager for Conventional Ammunition (SMCA), Department of the Army.</p> <p>-30MM Target Practice (TP) Cartridge PGU-15A/B (B116): A solid, inert projectile used to train aircrew in the use of the GAU-8/A cannon on the A-10 aircraft. The cartridge is mechanically primed and has no fuze, while the projectile is a solid slug designed to match the ballistics of high explosive incendiary and armor piercing incendiary cartridges. Air Force procures 30MM from the Single Manager for Conventional Ammunition (SMCA), Department of the Army.</p> <p>-30MM Combat Mix (AC56) (Formerly B103) consists of two Armor Piercing Incendiary rounds (PGU-14) and one High Explosive Incendiary (PGU-13) round and is employed on the GAU-8 cannon on the A-10 aircraft. Combat Mix is a primary combat ammunition for the A-10. The AF procures this item through Single Manager for Conventional Ammunition(SMCA).</p> <p>-30MM Urban Mix (AC29) consists of two High Explosive Incendiary (PGU-13) and one Target Practice (PGU-15) rounds and is employed on the GAU-8 cannon on the A-10 aircraft. Urban Mix is an alternate (lower collateral damage) combat ammunition for the A-10. The AF procures this item through Single Manager for Conventional Ammunition(SMCA).</p> <p>-25MM PGU-48/B (AB98): 25MM PGU-48/B (formerly Frangible Armor Piercing (FAP)) round to be used in GAU-22 gun on F-35/JSF. Air Force procures PGU-48/B through Hill AFB Contracting.</p> <p>SMALL CALIBER/GROUND MUNITIONS:</p> <p>Funds may also be used to evaluate commercial off the shelf (COTS)/or government off the shelf (GOTS) products as a suitable replacement or enhancement to current capabilities.</p> <p>-7.62MM Ball Linked M80 (A143): The M240 Machine Gun requires this linked round, used against personnel and unarmored targets. Air Force procures this item through the Single Manager for Conventional Ammunition (SMCA), Department of the Army.</p> <p>-5.56MM Blue Marking Cartridge (AC39): This round is used in force-on-force training of personnel in M16A2 and M4 rifles. It consists of a plastic projectile in a brass cartridge case. Air Force procures this item through the Single Manager for Conventional Ammunition (SMCA), Department of the Army.</p> <p>-5.56MM Frangible (AA40): This is the primary training round for the Air Force and consists of a lead-free small rifle primer in a brass cartridge case. These cartridges are more environmentally friendly than standard 5.56MM ball cartridges. The case is made of reusable/recyclable brass, which is the same as 5.56MM ball ammunition. The 5.56MM frangible cartridges are used in M16-series rifles, which include M4 rifles. The Air Force procures this item through the Navy.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 12: Cartridges		P-1 Line Item Number / Title: 352010 / Cartridges
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>-5.56MM Ball M855 (AB57): This is a lead-free primary combat round used in the M16A2 and M4 rifles, against personnel and unarmored targets. Air Force procures this item through the Single Manager for Conventional Ammunition (SMCA), Department of the Army.</p> <p>-Items Less Than Five Million Dollars: All items have an annual procurement of less than 5,000,000 and are Code A.</p> <p>These funds may also procure inventoried items which may not be procured on an annual basis and could be required on an emerging basis. Variations to cover critical shortfalls to inventory objectives as well as actual and planned expenditures will be addressed during execution year.</p> <p>Funds may be used to address production Diminishing Manufacturing Sources (DMS)/Material Shortages/Obsolescence issues through studies, bridge buys, life of type buys, supplier/parts replacement, to include electronic components used commercially and in short supply; and, qualification activities to preserve future production capabilities and capacities.</p> <p>In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.</p> <p>Funding for this exhibit contained in PEs: 0207580F, 0207599F, 0208015F and 0208030F.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 12: Cartridges

P-1 Line Item Number / Title:
352010 / Cartridges

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	IMPULSE CARTRIDGES				- / -	- / 26.660	- / 20.618	- / 26.483	- / -	- / 26.483
P-40a	Small Cal/Ground Munitions				- / -	- / 42.177	- / 54.070	- / 58.598	- / -	- / 58.598
P-40a	Medium Cal Ammo				- / -	- / 124.211	- / 83.111	- / 84.082	- / 0.000	- / 84.082
P-40	Total Gross/Weapon System Cost				- / -	- / 193.048	- / 157.799	- / 169.163	- / -	- / 169.163

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY2022 funds purchase small arms ammunition for use against personnel and unarmored targets; medium caliber ammunition used in aircraft gun systems against air-to-air, air-to-ground and light armored targets, as well as certain impulse cartridges needed to eject weapons stores from bomb racks and instigate aircraft countermeasures. FY2022 funding totals include \$40.741M requested for Direct War and/or Enduring Requirements.

The Air Force procures munitions to maintain appropriate quantities in the War Reserve Materiel (WRM) Munitions and test and training stockpiles. Active, Guard and Reserve components draw from the WRM stockpiles as required and receive test and training allocations annually based on current-year requirements.

MEDIUM CALIBER AMMO:

-20MM PGU-28 (AA22): This procurement will fulfill WRM requirements. Current stockpile inventory is 27% of total inventory objective and has low combat use.

-20MM PGU-27 (AA24): Procurements will support replenishments for expenditures used in pilot training and proficiency.

-20MM PGU-39 (A931): Procurement is necessary to replenish aging stockpiles of dummy ammunition rounds. Rounds are critical in providing gun system training and troubleshooting, and to verify weapon system readiness. Current inventory is severely aged (30+ years).

-30MM PGU-15 (B116): This procurement is critical to replenish WRM stockpiles to support pilot training and proficiency. Current stockpile inventory is 41% of total inventory objective.

-30MM PGU-13 (B104): This procurement is critical to replenish WRM stockpiles to support. Current stockpile inventory is 31% of total inventory objective and current expenditures meet or exceed previous procurement levels.

-30MM Combat Mix (AC56): NO PROCUREMENT ACTION IS PENDING

-30MM Urban Mix (AC29): NO PROCUREMENT ACTION IS PENDING

-25MM PGU-48/B (AB98): Procurement will fulfill WRM requirements. Current stockpile inventory is 74% of total inventory objective.

-25MM PGU-23 (A978): No procurement action is pending.

-25MM PGU-24 (A968): No procurement action is pending.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 12: Cartridges		P-1 Line Item Number / Title: 352010 / Cartridges
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>-20MM PGU-39 Dummy (A931: Procurement is critical to replenish aging stockpiles of dummy ammunition rounds. Rounds are critical in providing gun system training, troubleshooting, and to verify weapon system readiness. Current inventory is severely aged (30+ years).</p> <p>IMPULSE CARTRIDGES:</p> <ul style="list-style-type: none"> - BBU-35A/B IMPULSE CARTRIDGE (MG62): This procurement is critical to replenish WRM stockpiles/requirements. Approximately 1.5M assets are expended annually and 52K assets in the current stockpile are projected to expire by the end of FY22 if unused. Current stockpile inventory is 62% of the total inventory objective requirement. Air Force procures BBU-35 using a 5 year Indefinite Delivery Indefinite Quality (IDIQ) contract, which was awarded in June 2016. The most recent delivery order was awarded 16 September 2020 for a total of 2.2M cartridges for \$4.9M. Items are to be delivered by 16 September 2021. The next 5 year IDIQ is projected to award by July 2021. - BBU-36A/B IMPULSE CARTRIDGE (MG11): This procurement is critical to replenish WRM stockpiles/requirements. Approximately 270K assets are expended annually and no assets in the current stockpile are projected to expire by the end of FY22 if unused. Current stockpile inventory is 50% of the total inventory objective and this item is currently under a HAF Call. Air Force procures BBU-36 using a 5 year IDIQ contract, which was awarded in July 2016. The most recent delivery order was awarded 12 February 2020 for a total of 400K cartridges for \$1.6M. Items are to be delivered by 28 February 2021. The next 5 year IDIQ is projected to award by July 2021. - BBU-46A/B IMPULSE CARTRIDGE (MT40): NO PROCUREMENT ACTION IS PENDING - BBU-48A/B IMPULSE CARTRIDGE (SS27): This procurement is critical to replenish WRM stockpiles/requirements. Approximately 50K assets are expended annually and 528K assets in the current stockpile are projected to expire by the end of FY22 if unused. Current stockpile inventory is 36% of the total inventory objective requirement. Air Force procures BBU-48 using a 5 year Indefinite Delivery Indefinite Quality (IDIQ) contract, which was awarded in December 2016. The most recent delivery order was awarded 23 April 2019 for a total of 483K cartridges for \$4M. Items are to be delivered by 30 April 2020. The next 5 year IDIQ is projected to award by December 2021. - BBU-59/B IMPULSE CARTRIDGE (WD01): NO PROCUREMENT ACTION IS PENDING - BBU-63/B IMPULSE CARTRIDGE (SS44): This procurement is critical to replenish WRM stockpiles/requirements. Approximately 500 assets are expended annually and no assets in the current stockpile are projected to expire by the end of FY22 if unused. Current stockpile inventory is 100% of the total inventory objective requirement. The Air Force will procure BBU-63 through a new 5 year IDIQ projected to award by March 2021. The expected cost is \$676.90/each for a total of 2,955 cartridges delivered by February 2023. This cartridge is specific to the B-2 aircraft, and complex due to complexity of the design, deliveries are expected within four years. - ARD-446-1B IMPULSE CARTRIDGE (WB33): This procurement is critical to replenish WRM stockpiles/requirements. Approximately 45K assets are expended annually and no assets in the current stockpile are projected to expire by the end of FY22 if unused. Current stockpile inventory is 199% of the total inventory objective requirement. Air Force procures ARD-446 using a 3 year IDIQ contract, which was awarded in January 2020. The most recent delivery order was awarded 15 January 2020 for a total of 171K cartridges for \$1.6M. Items are to be delivered by 31 December 2021. Procurements are to support Aircrew stateside training requirements which are currently at risk. - ARD-863-1A1W IMPULSE CARTRIDGE (M189): This procurement is critical to replenish WRM stockpiles/requirements. Approximately 82K assets are expended annually and no assets in the current stockpile are projected to expire by the end of FY22 if unused. Current stockpile inventory is 183% of the total inventory objective requirement. Air Force procures ARD-863 using a 3 year IDIQ contract, which was awarded in January 2020. An Air Force delivery order has not been issued on the contract at this time. The first Air Force delivery order is anticipated to award in 2QFY21. The unit cost is \$9.26/each. - CCU-41/B IMPULSE CARTRIDGE (MF60): This procurement is to replenish WRM stockpiles/requirements. Approximately 84 assets are expended annually and 87K assets in the current stockpile are projected to expire by the end of FY22 if unused. Current stockpile inventory is 107% of the total inventory objective requirement. Air Force procures CCU-41 through a Navy IDIQ contract, which expires November 2025. The most recent delivery order was awarded 05 November 2020 for a total of 72K cartridges to be delivered by 28 February 2022. The unit cost was \$8.32/each and total spent was \$600K 		

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 12: Cartridges		P-1 Line Item Number / Title: 352010 / Cartridges
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>- CCU-106 IMPULSE CARTRIDGE: NO PROCUREMENT ACTION IS PENDING</p> <p>- CCU-107 IMPULSE CARTRIDGE (MT95): This is a procurement of a new item to build the WRM stockpile. Air Force will procure CCU-107 through a Navy contract.</p> <p>- CCU-136A/A IMPULSE CARTRIDGE (WA83): NO PROCUREMENT ACTION IS PENDING</p> <p>- CCU-145/A IMPULSE CARTRIDGE (WB24): This procurement is to replenish WRM stockpiles/requirements. Approximately 67K assets are expended annually and 321 assets in the current stockpile are projected to expire by the end of FY22 if unused. Current stockpile inventory is 171% of the total inventory objective requirement. Air Force procures CCU-145 through a Navy IDIQ contract. The most recent delivery order was awarded 24 February 2020 for a total of 400K cartridges to be delivered by 28 February 2022. The unit cost was \$4.84/each and total spent was \$2M.</p> <p>- CCU-167 IMPULSE CARTRIDGE (DWGY): This procurement is to replace the MK23 cutter cartridge with the updated CCU-167.</p> <p>- MK2 (M190): NO PROCUREMENT ACTION IS PENDING</p> <p>- MK-107 MOD 1 (M943): This procurement is to replenish critical WRM stockpiles/requirements. Approximately 1300 assets are expended annually and 8K assets in the current stockpile are projected to expire by the end of FY22 if unused. Current stockpile inventory is 147% of the total inventory objective requirement. Air Force procures MK-107 through a Navy IDIQ contract. The most recent delivery order was awarded 12 August 2020 for a total of 2940 chaff cartridges to be delivered by 26 October 2021. The unit cost was \$285.00/each and total spent was \$800K.</p> <p>- M21 (M600): NO PROCUREMENT ACTION IS PENDING</p> <p>- RR-170 CHAFF (LY07): NO PROCUREMENT ACTION IS PENDING</p> <p>- RR-180 CHAFF (SY16): This procurement is critical to replenish WRM stockpiles/requirements. Approximately 19K assets are expended annually and 29K assets in the current stockpile are projected to expire by the end of FY22 if unused. Current stockpile inventory is 44% of the total inventory objective requirement. Air Force procures RR-180 through a Navy IDIQ contract, which expires in December 2020. The most recent delivery order was awarded 13 April 2020 for a total of 315K chaff cartridges to be delivered by 30 July 2023. The unit cost was \$11.11/each and total spent was \$3.5M. The next 5 year IDIQ contract is projected to award in January 2021.</p> <p>- RR-188 CHAFF (3W37): This procurement is critical to replenish WRM stockpiles/requirements. Approximately 600K assets are expended annually and no assets in the current stockpile are projected to expire by the end of FY22 if unused. Current stockpile inventory is 165% of the total inventory objective requirement. Air Force procures RR-188 through a Navy IDIQ contract, which expires in December 2020. The most recent delivery order was awarded 13 April 2020 for a total of 449K chaff cartridges to be delivered by 30 April 2023. The unit cost was \$4.45/each and total spent was \$2M. The next 5 year IDIQ contract is projected to award in January 2021.</p> <p>- RR-196A/L (CY94): NO PROCUREMENT ACTION IS PENDING</p> <p>- RR-196(T-1)AL (NY02): This procurement is critical to replenish WRM stockpiles/requirements. Approximately 33K assets are expended annually and no assets in the current stockpile are projected to expire by the end of FY22 if unused. Current stockpile inventory is 152% of the total inventory objective requirement. Air Force procures RR-196(T-1) through a Navy IDIQ contract, which expires in December 2020. The most recent delivery order was awarded 21 April 2020 for a total of 45K chaff cartridges to be delivered by 30 June 2021. The unit cost was \$37.34/each and total spent was \$1.7M. The next 5 year IDIQ contract is projected to award in January 2021.</p> <p>- RR-198AL: This is a procurement of a new item to build the WRM stockpile. Air Force will procure RR-198AL through a Navy IDIQ contract scheduled to award 30 June 2021.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 12: Cartridges		P-1 Line Item Number / Title: 352010 / Cartridges
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
- RR-199: This is a procurement of a new item to build the WRM stockpile. Air Force will procure RR-198AL through a Navy IDIQ contract scheduled to award 30 June 2021.		
SMALL CALIBER/GROUND MUNITIONS: See SMALL CAL/GROUND MUNITIONS P-40a		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 12 **P-1 Line Item Number / Title:** 352010 / Cartridges **Aggregated Items Title:** IMPULSE CARTRIDGES

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Impulse Cartridges																				
(MT40) BBU-46	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(WB33) ARD-446	A		-	-	-	0.000	107,990	1.000	0.000	106,951	1.000	0.000	158,730	1.500	-	-	-	0.000	158,730	1.500
(3W37) CHAFF, RR-188	A		-	-	-	0.000	674,119	3.000	0.000	446,717	2.006	0.000	385,463	1.750	-	-	-	0.000	385,463	1.750
(JN31) CU-168 SQUIB	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(M189) ARD-863	A		-	-	-	0.000	83,752	0.500	0.000	165,837	1.000	0.000	164,204	1.000	-	-	-	0.000	164,204	1.000
(M943) MK107 IMPULSE CARTRIDGE	A		-	-	-	0.000	5,209	1.485	0.000	5,902	1.699	-	-	-	-	-	-	-	-	-
(MT95) CCU-107	A		-	-	-	0.000	1,148	0.006	0.000	19,192	0.096	-	-	-	-	-	-	-	-	-
(YWAP) RR-198	A		-	-	-	0.000	773	0.197	0.000	5,231	1.334	0.000	6,000	1.530	-	-	-	0.000	6,000	1.530
(YWAQ) RR-199	A		-	-	-	0.000	1,889	0.145	-	-	-	0.000	2,000	0.153	-	-	-	0.000	2,000	0.153
(MG11) CTG, IMPULSE, BBU-36/B	A		-	-	-	0.000	499,824	1.999	0.000	420,911	1.700	0.000	416,667	1.700	-	-	-	0.000	416,667	1.700
(MG62) BBU-35/B IMPULSE CARTRIDGE	A		-	-	-	0.000	2,810,349	6.070	0.000	1,528,439	3.332	0.000	1,795,455	3.950	-	-	-	0.000	1,795,455	3.950
(MT40) BBU-46 SQUIB, ELECTRIC	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(NY02) CHAFF, RR-196(T-1)AL	A		-	-	-	0.000	99,068	3.699	0.000	26,673	1.006	0.000	65,634	2.500	-	-	-	0.000	65,634	2.500
(SS-27) BBU-48/B IMPULSE CARTRIDGE	A		-	-	-	-	-	-	-	-	-	0.000	545,024	4.600	-	-	-	0.000	545,024	4.600
(SS44) BBU63/B IMPULSE CARTRIDGE	A		-	-	-	-	-	-	0.001	3,193	1.999	0.001	3,162	2.000	-	-	-	0.001	3,162	2.000
(LY07) RR-170 CHAFF CARTRIDGE	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(SY16) RR-180 CHAFF CARTRIDGE	A		-	-	-	0.000	315,000	3.500	0.000	285,722	3.206	0.000	308,914	3.500	-	-	-	0.000	308,914	3.500
(MF60) CCU-41	A		-	-	-	0.000	18,659	0.093	0.000	60,000	0.300	0.000	60,000	0.300	-	-	-	0.000	60,000	0.300
(M190) MK-2	A		-	-	-	0.001	1,043	0.939	0.001	7	0.006	-	-	-	-	-	-	-	-	-
(WB24) CCU-145	A		-	-	-	0.000	166,165	0.804	0.000	395,499	1.934	0.000	404,858	2.000	-	-	-	0.000	404,858	2.000
Items less than 5 M	A		-	-	-	-	-	3.009	-	-	-	-	-	-	-	-	-	-	-	-
(DWGY) CCU-167/B	A		-	-	-	0.000	21,440	0.214	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Impulse Cartridges			-	-	-	-	-	26.660	-	-	20.618	-	-	26.483	-	-	-	-	-	26.483
Total			-	-	-	-	-	26.660	-	-	20.618	-	-	26.483	-	-	-	-	-	26.483

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 12 **P-1 Line Item Number / Title:** 352010 / Cartridges **Aggregated Items Title:** Small Cal/Ground Munitions

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
AMMUNITION CARTRIDGES																				
(A014) CTG, 12 GA SHOTGUN, 7-1//2 PLASTIC	A		-	-	-	-	-	-	-	-	0.000	14,634	0.012	-	-	-	0.000	14,634	0.012	
(A011) CTG 12 GAUGE NO. 00 BUCKSHOT	A		-	-	-	0.000	67,567	0.050	0.000	80,645	0.050	0.000	80,645	0.050	-	-	-	0.000	80,645	0.050
(A017) CTG, 12 GA BUCKSHOT	A		-	-	-	0.000	223,999	0.056	0.000	71,429	0.025	0.000	71,429	0.025	-	-	-	0.000	71,429	0.025
(A062) CTG, 5.56MM BALL M855 LINKED	A		-	-	-	0.000	1,418,919	1.050	0.000	1,630,435	0.750	-	-	0.000	-	-	-	-	-	0.000
(A059) 5.56 BALL M855 CLIPPED	A		-	-	-	0.000	3,284,072	1.000	-	-	-	-	-	0.000	-	-	-	-	-	0.000
(A080) CTG, 5.56MM BLANK M200	A		-	-	-	-	-	-	0.000	434,782	0.100	0.000	434,783	0.100	-	-	-	0.000	434,783	0.100
(A091) CTG, .22 CAL LONG RIFLE	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(A131) CTG, 7.62MM BALL 4-1 LINKED	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(A143) 7.62MM BALL LINKED (M80)	A		-	-	-	0.000	535,713	0.300	0.000	365,854	0.300	0.000	4,634,146	3.800	-	-	-	0.000	4,634,146	3.800
(A164) CTG, 7.62MM LINKED	A		-	-	-	0.000	1,104,851	0.597	-	-	-	-	-	0.000	-	-	-	-	-	0.000
(A246) CTG, .30 CAL BALL BULK	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(A165) CARTRIDGE 7.62MM M80	A		-	-	-	0.000	999,999	0.550	-	-	-	0.000	7,246,377	5.000	-	-	-	0.000	7,246,377	5.000
(A257) CTG, 7.62MM 9-1 DIM TRACER	A		-	-	-	0.000	363,232	0.200	0.000	285,714	0.200	0.000	285,714	0.200	-	-	-	0.000	285,714	0.200
(A363) 9MM BALL NATO XM882 PISTOL	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(A358) 9MM SUBCAL AT4 TRACER	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(A404) CTG, .38 CAL SP BALL WADCUTTER	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(A475) CTG, CAL .45 BALL M1911	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(A482) CTG CAL .45 BALL WADCUTTER	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(A483) CTG CAL .45 BALL M1911 MTCHGRD	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 12 **P-1 Line Item Number / Title:** 352010 / Cartridges **Aggregated Items Title:** Small Cal/Ground Munitions

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
(A552) CTG, .50 CAL BALL SINGLE ROUND, M33	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
(A555) CTG, CAL .50 BALL M2 LINKED	A		-	-	-	0.000	1,232,227	2.600	0.000	769,149	2.000	0.000	961,538	2.500	-	-	-	0.000	961,538	2.500
(A557) CTG, CAL .50 BALL/TRACER/ LINKED M2/M9	A		-	-	-	0.000	1,249,999	2.750	0.000	985,524	2.750	0.000	1,218,638	3.400	-	-	-	0.000	1,218,638	3.400
(A598) CTG CAL.50 BLNK CRMPD W/M9 LNK	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(A606) CTG, CAL.50 API MK211 MOD 0	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(A607) CTG, .50 CAL ARMOR PIERCING INCENDIARY	A		-	-	-	0.000	316,455	2.500	0.000	59,311	0.599	0.000	59,406	0.600	-	-	-	0.000	59,406	0.600
(AA02) CTG 5.56MM AP/TR M995/M856 4-1	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AA03) CTG. 7.62 M993 AP	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AA04) CTG. 7.62MM 4 AP M9331/1TR M62 W/LK M13	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AA11) CTG. 7.62 NATO M118 SPEC BALL	A		-	-	-	0.000	294,115	0.200	0.000	1,904,420	1.714	-	-	-	-	-	-	-	-	-
(AA16) 9 MILLIME CARTRIDGE FRANG	A		-	-	-	0.000	7,147	3.500	0.000	2,999,715	3.000	0.000	6,000,000	6.000	-	-	-	0.000	6,000,000	6.000
(AA40) 5.56 FRANGIBLE	A		-	-	-	0.000	34,614,708	13.500	0.000	38,328,282	14.948	0.000	39,487,179	15.400	-	-	-	0.000	39,487,179	15.400
(AA51) 12 GA NON-LETHAL PT-CONT	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AA52) 12 GA NON-LETHAL CROWD	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AA53) CTG 5.56 SPECIAL MK262 MOD 1	A		-	-	-	-	-	-	0.000	2,500,000	1.000	0.000	1,052,632	0.400	-	-	-	0.000	1,052,632	0.400
(AB10) 5.56 RED MARKING CARTRIDGES	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AB13) 9MM BLUE MARKING CARTRIDGE	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AB14) 9M RED MARKING CARTRIDGE	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 12 **P-1 Line Item Number / Title:** 352010 / Cartridges **Aggregated Items Title:** Small Cal/Ground Munitions

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
(AB39) 7.62MM SPECIAL BALL, LONG RANGE	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
(HA29) 66MM HIGH EXP LITE ANTI TANK WEAPON	A		-	-	-	-	-	-	0.004	1,870	6.912	-	-	-	-	-	-	-	-	
(C995) AT-4 84MM ROCKET	A		-	-	-	-	-	-	0.003	1,587	4.455	-	-	-	-	-	-	-	-	
(AB16) 5.56 BLUE MARKING CARTRIDGE	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
(AB56) 5.56MM M855A1 LINKED LEAD FREE CART	A		-	-	-	0.000	4,054,054	1.500	0.000	2,884,615	1.500	0.000	2,884,615	1.500	-	-	-	0.000	2,884,615	1.500
(AB57) 5.56MM M855A1 CLIPPED, LEAD FREE	A		-	-	-	0.000	1,351,351	0.500	-	-	-	-	-	-	-	-	-	-	-	-
(AB46) 5.56MM SINGLE ROUND DUMMY	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AB47) 7.62MM DUMMY	A		-	-	-	0.000	45,727	0.049	-	-	-	-	-	-	-	-	-	-	-	-
(AB48) .50 CAL SINGLE DUMMY CART	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AB57) 5.56 M855A1 CLIPPED, LEAD FREE	A		-	-	-	-	-	-	0.000	1,041,600	0.500	0.000	1,041,667	0.500	-	-	-	0.000	1,041,667	0.500
(AB72) CTG, 7.62MM SINGLE ROUND BLANK (was A112)	A		-	-	-	-	-	-	0.000	237,804	0.200	0.000	190,476	0.160	-	-	-	0.000	190,476	0.160
(AB67) 5.56 MM PLASTIC	A		-	-	-	0.000	262,120	0.349	-	-	-	-	-	-	-	-	-	-	-	-
(AB73) 5.56 M856 A1 LEAD FREE	A		-	-	-	0.000	3,333,333	1.500	0.000	2,542,373	1.500	0.000	847,458	0.500	-	-	-	0.000	847,458	0.500
(AB74) 5.56 TRACER ROUND	A		-	-	-	0.000	103,093	0.100	0.000	64,103	0.100	0.000	64,103	0.100	-	-	-	0.000	64,103	0.100
(AB75) 5.56 LINKDED M855A1/M86A1	A		-	-	-	-	-	-	0.000	114,000	0.114	0.000	500,000	0.500	-	-	-	0.000	500,000	0.500
(AC20) 9MM BALL	A		-	-	-	0.000	16,666,666	3.000	0.000	15,787,082	3.000	0.000	31,431,579	5.972	-	-	-	0.000	31,431,579	5.972
(AC21) 9MM HOLLOW POINT	A		-	-	-	0.000	16,013	0.400	0.000	1,818,181	0.400	0.000	1,818,182	0.400	-	-	-	0.000	1,818,182	0.400
(AC36) 9MM BLUE MARKING CARTRIDGE	A		-	-	-	0.000	376,438	0.399	0.000	303,030	0.200	0.000	757,576	0.500	-	-	-	0.000	757,576	0.500

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 12 **P-1 Line Item Number / Title:** 352010 / Cartridges **Aggregated Items Title:** Small Cal/Ground Munitions

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
(AC37) 9MM RED MARKING CARTRIDGE	A		-	-	-	0.000	376,244	0.399	0.000	597,015	0.400	0.000	746,269	0.500	-	-	-	0.000	746,269	0.500
(AC39) 5.56 BLUE MARKING CARTRIDGE	A		-	-	-	-	-	-	0.000	394,737	0.300	0.000	4,605,263	3.500	-	-	-	0.000	4,605,263	3.500
(AC40) 5.56 RED MARKING CARTRIDGE	A		-	-	-	0.000	742,730	0.550	0.000	723,683	0.550	0.000	743,243	0.550	-	-	-	0.000	743,243	0.550
(AY04) CTG 12 GAGE BIRD SCARE	A		-	-	-	0.000	44,593	0.033	-	-	-	0.000	30,000	0.030	-	-	-	0.000	30,000	0.030
(AC42) 5.56 DYE MARKING ROUND BLUE LINKED	A		-	-	-	0.000	376,526	0.399	-	-	-	-	-	-	-	-	-	-	-	-
(B508) 40MM CTG GREEN SMOKE M175	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(B509) 40MM CTG YELLOW SMOKE	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(B519) CARTRIDGE, 40MM PRACTICE M781	A		-	-	-	-	-	-	0.000	2,564,101	2.000	0.000	2,000,000	2.000	-	-	-	0.000	2,000,000	2.000
(B584) 40MM CART LINKED	A		-	-	-	-	-	-	0.000	62,270	2.500	-	-	-	-	-	-	-	-	-
(B535) 40MM SWS M583	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(B542) 40 MIL CARTRIDGE HEDP	A		-	-	-	0.000	455	0.031	0.000	8,270	0.005	-	-	-	-	-	-	-	-	-
(B576) CTG, 40MM PRACTICE, LINKED, HIGH VELOCITY	A		-	-	-	0.000	58	0.001	-	-	-	-	-	-	-	-	-	-	-	-
AIR FORCE SHOOTING TEAM	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(BA21) 40MM PRACTICE, DAY/ NIGHT LINKED	A		-	-	-	0.000	250,000	4.000	0.000	125,000	2.000	0.000	125,000	2.000	-	-	-	0.000	125,000	2.000
(BA54) 40MM PRACTICE, DAY/ NIGHT LINKED	A		-	-	-	-	-	0.115	-	-	-	0.000	147,631	2.399	-	-	-	0.000	147,631	2.399
(LA51) SIMULATOR, SMALL ARMS FIRE	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(LA52) SIMULATOR, SMALL ARMS FIRE	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: AMMUNITION CARTRIDGES			-	-	-	-	-	42.177	-	-	54.070	-	-	58.598	-	-	-	-	-	58.598
Total			-	-	-	-	-	42.177	-	-	54.070	-	-	58.598	-	-	-	-	-	58.598

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 12	P-1 Line Item Number / Title: 352010 / Cartridges	Aggregated Items Title: Small Cal/Ground Munitions

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:

All Ammunition Cartridges:

Prices are provided by the Single Manager for Conventional Ammunition (SMCA), Department of the Army. Prices shown represent the SMCA efforts to obtain munitions items for the DoD Military Services purchasing the same or similar items. Cost drivers include economic price adjustments, currency rate fluctuations, price of complex or scarce materials and orders from other Military Services (increases/decreases). Prices can change based on contracts with Lake City Army Ammo Plant (LCAAP) and the planned procurements of other customers.

The Navy procures Frangible rounds such as DODIC AA16, 9MM for the Air Force and prices provided based on vendor estimates and AF and Navy combined planned procurements.

All Chaff and Impulse Cartridges:

The Navy procures Chaff and some Impulse Cartridge (all CCU and MK cartridges) items based on planned Air Force and Navy requirements.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 12 **P-1 Line Item Number / Title:** 352010 / Cartridges **Aggregated Items Title:** Medium Cal Ammo

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Medium Cal																				
(A931) 20MM, PGU -29	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(A968) PGU-24 DUMMY ROUND	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(A978) CTG, 25MM, TP (PGU-23/U)	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AA22) 20MM, PGU-28 A/B Semi-AP, HEI	A		-	-	-	-	-	-	0.000	530,390	4.950	0.000	223,663	7.000	-	-	-	0.000	223,663	7.000
(AA11) 7.62MM, SP Ball M118	A		-	-	-	-	-	-	-	-	-	0.000	6,666	0.200	-	-	-	0.000	6,666	0.200
(AA24), 20MM, TP PGU-27 A/B	A		-	-	-	0.000	633,667	5.422	-	-	-	0.000	457,296	6.393	-	-	-	0.000	457,296	6.393
(AA94) 30MM, PGU-15	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AB18) 30MM, PGU-13 D/B	A		-	-	-	-	-	-	-	-	0.004	-	-	-	-	-	-	-	-	-
(AB98) 25MM PGU-48/B	A		-	-	-	-	-	-	0.000	97,054	20.002	0.000	97,054	14.400	-	-	-	0.000	97,054	14.400
(AC29) 30MM, URBAN MIX	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AC56) COMBAT MIX 2:1	A		-	-	-	-	-	0.226	-	-	0.008	-	-	-	-	-	-	-	-	-
(B103) COMBAT MIX	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(B104) 30MM, PGU-13/B	A		-	-	-	0.000	1,376,681	46.003	0.000	650,000	20.788	0.000	971,599	13.000	-	-	-	0.000	971,599	13.000
(B116) 30MM PGU-15/B, TP	A		-	-	-	0.000	2,461,059	68.716	0.000	1,644,469	36.259	0.000	1,927,477	43.089	-	-	0.000	0.000	1,927,477	43.089
PMA	A		-	-	-	-	-	3.844	-	-	1.100	-	-	-	-	-	-	-	-	-
Subtotal: Medium Cal			-	-	-	-	-	124.211	-	-	83.111	-	-	84.082	-	-	0.000	-	-	84.082
Total			-	-	-	-	-	124.211	-	-	83.111	-	-	84.082	-	-	0.000	-	-	84.082

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 13: Bombs	P-1 Line Item Number / Title: 353010 / Practice Bombs
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	29.313	34.313	48.745	-	48.745	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	29.313	34.313	48.745	-	48.745	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	29.313	34.313	48.745	-	48.745	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The following Weapon System Cost Elements are represented in this P-1 line:

- BDU-56D/B: A 2,000-pound, non-explosive training shape, without internal plumbing, used to provide combat forces with aircrew weapons delivery training. The BDU-56 simulates the drop trajectory of a live MK-84/BLU-117. This item is procured through the Single Manager for Conventional Ammunition (SMCA)/Army.
- BDU-50/B: A 500-pound thick-wall cast ductile iron, non-explosive training shape used to provide combat air forces with aircrew weapons delivery training. The BDU-50 simulates the drop trajectory of a live MK-82/BLU-111. This item is procured through the SMCA/Army.
- MK-84 Inert: : A 2,000-pound, non-explosive training shape, with internal plumbing, used to provide combat forces with aircrew weapons delivery training. The MK-84 Inert simulates the drop trajectory of a live MK-84/BLU-117. This item is procured through the SMCA/Army.
- BDU-33: A 25-pound, non-explosive, tear shaped, practice bomb used to simulate the 500 lb. MK-82/BLU-111 and 2000 lb. MK-84/BLU-117 general purpose, non-guided, bombs in a low drag configuration. Upon impact the bomb drives a firing pin assembly against a primer activating the signal charge, permitting visual evaluation of accuracy. This item is procured through the SMCA/Army.
- MK4 Mod 3, Signal Cartridge: The cartridge consists of an aluminum case. The rim end has a percussion primer, and the opposite end is sealed with an aluminum disk. The cartridge produces a flash of light and a puff of smoke. The MK4 Mod 3 is primarily used for night operations as a visual indication of bomb impact and fuze function. This item is procured through the SMCA/Army.
- CXU-3A/B, Signal Cartridge: The cartridge consists of an aluminum case. The rim end has a percussion primer, and the opposite end is sealed with an aluminum disk. The cartridge produces a dense, white smoke display. The CXU-3A/B is primarily used for day operations as a visual indication of bomb impact and fuze function. This item is procured through the SMCA/Army.

Funds may be used to address production Diminishing Manufacturing Sources (DMS)/Material Shortages/Obsolescence issues through studies, bridge buys, life of type buys, supplier/parts replacement, to include electronic components used commercially and in short supply, and qualification activities to preserve future production capabilities and capacities.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 13: Bombs		P-1 Line Item Number / Title: 353010 / Practice Bombs
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.</p> <p>These funds may also procure inventoried items which may not be procured on an annual basis and could be required on an emerging basis. Variations to cover critical shortfalls to inventory objectives as well as actual and planned expenditures will be addressed during execution year. Examples include, but are not limited to, BDU-56/B, BDU-50C/B, MK-84 Inert, BDU-33, MK4 Mod 3 Signal Cartridge, and CXU-3A/B Signal Cartridge.</p> <p>Funding for this exhibit contained in PE 0207599F.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 13: Bombs

P-1 Line Item Number / Title:
353010 / Practice Bombs

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	Practice Bombs				- / -	- / 29.313	- / 34.313	- / 48.745	- / -	- / 48.745
P-40	Total Gross/Weapon System Cost				- / -	- / 29.313	- / 34.313	- / 48.745	- / -	- / 48.745

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The USAF Practice Bombs budget has been consistently underfunded to replenish annual expenditures and to be able to support HAF/A4 training requirements. The FY2022 budget submission was calculated to provide enough funding to replace the average annual expenditures for the BDU-56, BDU-50, and BDU-33 non-explosive training bombs and also MK4 Mod 3 and CSU-3A/B Signal Cartridges to provide combat air forces with weapons build-up and aircrew weapons delivery training. These practice bombs simulate drop trajectory and weight of explosive-filled weapons. If the Practice Bombs budget continues to be reduced/cut then inventory levels will drop below inventory objectives within the FYDP. BDU-56s and MK4 Mod 3 signal cartridges are currently below inventory objectives.

Funding below the levels in the FY2022 budget submission will also bring instability to Allied Mechanical Wisconsin, which has been underfunded for years, has experienced single-year fluctuations in investments, and struggled through an unprecedented COVID-19 environment. In order to replenish the approximately 15,000 BDU-50s expended annually, AMW employs a single shift throughout the calendar year. Budget reductions will drive a reduction in workforce and potential viability of this sole source supplier. The USAF invested in AMW over three years to establish a manufacturing line for the BDU-50. Currently, the BDU-50 is the only product AMW produces.

The Air Force procures munitions to maintain appropriate quantities in the War Reserve Materiel (WRM) Munitions and test and training stockpiles. Active, Guard and Reserve components draw from the WRM stockpiles as required and receive test and training allocations annually based on current-year requirements.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13 **P-1 Line Item Number / Title:** 353010 / Practice Bombs **Aggregated Items Title:** Practice Bombs

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
(E96) BDU-56D/B	A		-	-	-	0.002	11,684	17.536	0.006	2,578	15.947	0.006	1,617	10.000	-	-	-	0.006	1,617	10.000
(E756) BDU-50/B	A		-	-	-	0.002	7,734	11.777	0.002	6,276	15.085	0.002	13,935	33.500	-	-	-	0.002	13,935	33.500
(F262) MK84 INERT PRAC BOMB	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(E969) BDU-33	A		-	-	-	-	-	-	0.000	16,900	1.521	0.000	36,056	3.245	-	-	-	0.000	36,056	3.245
(F562) MK4 Mod 3, Signal Cartridge	A		-	-	-	-	-	-	0.001	1,497	1.497	0.001	1,000	1.000	-	-	-	0.001	1,000	1.000
(F470) CXU-3A/B, Signal Cartridge	A		-	-	-	-	-	-	-	-	-	-	-	1.000	-	-	-	-	-	1.000
FDT	A		-	-	-	-	-	-	-	-	0.263	-	-	-	-	-	-	-	-	-
Subtotal: Uncategorized			-	-	-	-	-	29.313	-	-	34.313	-	-	48.745	-	-	-	-	-	48.745
Total			-	-	-	-	-	29.313	-	-	34.313	-	-	48.745	-	-	-	-	-	48.745

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 13: Bombs	P-1 Line Item Number / Title: 353020 / General Purpose Bombs
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	621.732	369.566	176.565	-	176.565	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	621.732	369.566	176.565	-	176.565	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	621.732	369.566	176.565	-	176.565	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

- FY2020 funding totals include \$545.309M appropriated for Overseas Contingency Operations.
- FY2021 funding totals include \$369.566M appropriated for Overseas Contingency Operations.
- FY2022 funding totals include \$169.590M requested for Direct War and/or Enduring Requirements.
- FY2022 funding request was reduced by \$40.453M to account for the availability of prior year execution balances.

The following Weapon System Cost Elements are represented in this P-1 line:

- MXU-651 B/B (EC31/EC28) is an airfoil group consisting of an aft wing assembly, forward canards and attaching hardware needed to assemble a GBU-10 Laser Guided Bomb (BLU-109 2000 pound (lb) Hard Target Penetrator Bomb or MK84 2000lb class bomb). The system has folding wings which open upon release for increased maneuverability. This item is procured by Munitions Sustainment Division at Hill AFB, UT.

- MXU-650 Fin Assembly kit (EC32) consists of a tail fin, forward canards and attachment hardware needed to assemble the GBU-12 (MK-82 Warhead, 500lb class) Laser Guided Bomb (LGB). This Fin assembly kit, coupled with a Computer Control Group (ED58) complete the GBU-12 weapons build. These weapons are primarily used for precision bombing against non-hardened targets. This item is procured by Munitions Sustainment Division at Hill AFB.

- MAU-209/MAU-169 (ED58) GBU-10/12 Computer Control Group is a laser homing guidance unit used on the GBU-10 and GBU-12 Laser Guided Bombs, (GBU-10, MK-84 Warhead, 2000lb class or GBU-12, MK-82 Warhead, 500lb class). The system has folding wings which open upon release for maneuverability and increased aircraft payload. This item is procured by Hill AFB. Laser Guided Bombs are essential to meeting training, operational and inventory objective requirements worldwide for precision bombing against hardened and non-hardened targets. Yearly procurements ensure the necessary stock on hand to meet these requirements. Paveway II telemetry (TM) kits are radio monitored modules installed in the GBU-10, 12 and 16 weapon systems that monitor and track data during flight. They provide essential data for issues such as flight failures and weapon accuracy as well as data for the long term sustainment of the weapon system.

- BLU-117/MK-84 is a 2,000lb class general purpose bomb. The bomb produces blast and fragmentation effects and can be used as either an unguided high or low drag weapon. When used with a guidance kit, it can be employed as a precision guided bomb. The warhead is used on the GBU-10/12 (PAVEWAY) and Joint Direct Attack Munition (GBU-31) weapon systems. The BLU-117 can also be fuzed with

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 13: Bombs		P-1 Line Item Number / Title: 353020 / General Purpose Bombs
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>proximity, instantaneous, or delayed fuzes to provide a variety of military effects. This item is procured through the Army Single Manager for Conventional Ammunition (SMCA). The MK-84 is a tritonal-filled variant.</p> <ul style="list-style-type: none"> - BLU-111 (all variants) is a 500lb General Purpose Bomb, based on the tritonal-filled MK-82. It has a relatively thin case with a slender body designed for improved ballistics. It can be employed as a general purpose/penetrator bomb delivered in high and low drag modes with ground burst, delayed, or air burst fuzes, and as precision-guided munitions (GBU-12,-38, or -54) and aerial mines depending on the fin/airfoil group and fuzing. Funding may be used to correct BLU-111 (all variants) deficiencies resulting in new fielding nomenclatures. - BLU-109 warhead is a 2000lb hard target penetrator bomb used against bunkers, aircraft shelters, and reinforced concrete structures. The warhead is used on the GBU-10, 24, and 27 as well as Joint Direct Attack Munition (JDAM) GBU-31V3 weapon systems. This item is procured through the Army Single Manager for Conventional Ammunition (SMCA). Variants are filled with tritonal or with a more Insensitive munitions (IM) compliant fill. - BLU-137 Advanced 2,000lb Penetrator (A2K) is a weapon used against bunkers, aircraft shelters, and reinforced concrete structures and is compatible with the JDAM guidance tail kit. The BLU-137/B is an advanced/modernized design to the BLU-109 warhead with increased reliability and survivability to prosecute increased target sets. Procurement started in FY18 at Eglin AFB (AFLCMC/EBD) and is forecast to begin transition to Hill AFB (AFLCMC/EBH)FY23. - BLU-129/B Composite Case Warhead - Carbon fiber composite case for high near-field lethality to deliver 3x reduction in collateral damage. - BLU-138/GBU-72 Advanced 5,000lb Penetrator (A5K) has optimized performance against the HTM AoA priority target set of tunnels and bunkers. With enhanced survivability, increased lethality, smart fuzing and utilization of fielded JDAM Navigation tailkits, the GBU-72 significantly improved performance reducing the number of weapons required to achieve a kill at lower AUR cost. A5K will replace the GBU-28 and Procurement will begin in FY22. - MK-81 is a 250lb class general purpose bomb. The bomb is designed for soft, fragment sensitive targets, such as troops, POL, and radars. The item is procured through Army Single Manager for Conventional Ammunition (SMCA). - Next Generation Area Attack Weapons (NGAAWs) are a family of unitary area attack weapons which meet the DoD policy on cluster munitions. It consists of the BLU-134/B and BLU-136/B warheads with a height of burst sensor. The BLU-134/B, Improved Lethality Warhead (ILW), Next Generation Area Attack Weapon Increment I, is a 500lb area attack warhead with improved lethality against personnel and materiel targets. The unitary warhead meets DoD policy on cluster munitions. Currently EBH is pursuing a Tritonal filled version of the BLU-134. If Tritonal is qualified for use and Program Office secures an IM waiver, then funding in FY21 and FY22 will be used to procure the Tritonal variant. The BLU-136/B, Next Generation Area Attack Weapon Increment II, is a 2,000lb, high fragmentation area attack warhead which, augmented by the BLU-134/B, provides for significant improved lethality against personnel and materiel targets and meets DoD policy on cluster munitions. - Items Less Than Five Million Dollars: All items have an annual procurement of less than 5,000,000 and are Code A. Portion of FY23 funding will be used to procure Machined Bomb Suspension Lugs for EBH programs. Program Office is currently conducting efforts to determine viability of a machined lug vs. the current forged lug. Forged lugs have proven to be extremely difficult to manufacture and has experienced DMSMS issues with limited forging houses and plating houses. If machined lugs prove to be a suitable substitute, a portion of FY23 funding will be used to procure the machined lug. This is considered a New Start program. <p>Portion of FY20-FY24 funding will be used for facilitization efforts. This will enhance production line capacity required to replenish inventory, accommodate large caliber warheads, and provide for alternative explosive fills.</p> <p>Funds may be used to address production Diminishing Manufacturing Sources (DMS)/Material Shortages/Obsolescence issues through studies, bridge buys, life of type buys, supplier/parts replacement, to include electronic components used commercially and in short supply, and qualification activities to preserve future production capabilities and capacities.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 13: Bombs		P-1 Line Item Number / Title: 353020 / General Purpose Bombs
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.</p> <p>These funds may also procure inventoried items which may not be procured on an annual basis and could be required on an emerging basis. Variations to cover critical shortfalls to inventory objectives as well as actual and planned expenditures will be addressed during execution year.</p> <p>Funding for this exhibit contained in PEs: 0208030F, 0207599F.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 13: Bombs

P-1 Line Item Number / Title:
353020 / General Purpose Bombs

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	(E466) MK-81, 250LB GP BOMB, TRITONAL				- / 0.000	- / 9.268	- / 0.000	- / 0.000	- / -	- / 0.000
P-40a	(EC32) MXU-650 GCG, FIN ASSEMBLY				- / -	- / 14.797	- / 0.000	- / 0.000	- / -	- / 0.000
P-40a	500LB GP Bomb Variants				- / -	- / 198.504	- / 99.871	- / 51.816	- / -	- / 51.816
P-40a	2000LB Hard Target Penetrator Variants				- / -	- / 85.024	- / 70.590	- / 33.600	- / -	- / 33.600
P-40a	(ED58) MAU-209C/B CCG				- / -	- / 28.820	- / 0.000	- / 0.000	- / -	- / 0.000
P-40a	2000lbs GP Bombs Variants				- / -	- / 149.821	- / 135.944	- / 0.000	- / -	- / 0.000
P-40a	A5K (GBU-72)				- / -	- / -	- / -	- / 36.000	- / -	- / 36.000
P-40a	BLU-134/B CDI 500LB				- / -	- / 41.000	- / -	- / -	- / -	- / -
P-40a	BLU-136/B 2000LB GP BOMB				- / 0.000	- / 22.683	- / 34.548	- / 43.189	- / -	- / 43.189
P-40a	GENERAL PURPOSE BOMBS (ITEMS LESS THAN \$5 MILLION)				- / -	- / 71.815	- / 28.613	- / 11.960	- / -	- / 11.960
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 621.732	- / 369.566	- / 176.565	- / -	- / 176.565

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

This program, General Purpose Bombs P-40A Category Uncategorized Item GBU-72, is a new start.

FY2022 funding totals include \$169.590M requested for Direct War and/or Enduring Requirements.
FY2022 funding request was reduced by \$40.453M to account for the availability of prior year execution balances.

FY2022 funds purchase 250, 500, 1,000, 2,000, and 5,000 pound conventional general purpose bombs, guidance and control kits, and energetics to provide precision bombing capability. In addition, funds may be used for equipment or support required to enhance production line capacity as required for inventory replenishment, as well as obsolescence and deficiency corrections. These weapons are used to defeat non-hard, hardened and deeply buried targets, bunkers, aircraft shelters, reinforced concrete structures and various armored targets. Built up with assorted componentry, the bombs can also be employed as Joint Direct Attack Munitions or Laser Guided Bombs.

The Air Force procures munitions to maintain appropriate quantities in the War Reserve Materiel (WRM) Munitions and test and training stockpiles. Active, Guard and Reserve components draw from the WRM stockpiles as required and receive test and training allocations annually based on current-year requirements.

Procurement/Replenishment is required to maintain readiness objectives and worldwide war reserve materiel (WRM) stockpiles to support requirements for penetrator bombs, low collateral damage bombs, and multiple precision guided bomb configurations as determined by the non-nuclear consumables annual analysis (NCAA), to execute DoD approved combat plans and training requirements.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force															Date: May 2021				
Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13						P-1 Line Item Number / Title: 353020 / General Purpose Bombs						Aggregated Items Title: (E466) MK-81, 250LB GP BOMB, TRITONAL							

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
UNCATEGORIZED																				
(E466) MK-81, 250LB BOMB	A		-	-	0.000	0.004	2,317	9.268	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
Subtotal: UNCATEGORIZED			-	-	0.000	-	-	9.268	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
Total			-	-	0.000	-	-	9.268	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13 **P-1 Line Item Number / Title:** 353020 / General Purpose Bombs **Aggregated Items Title:** (EC32) MXU-650 GCG, FIN ASSEMBLY

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
MXU-650 FIN ASSEMBLY - EC32	A		-	-	-	0.004	3,840	14.797	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
Subtotal: Uncategorized			-	-	-	-	-	14.797	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
Total			-	-	-	-	-	14.797	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:

Prices shown reflect the average unit cost of split-award contracts plus inflation. Due to the competitive nature of the currently qualified vendors, estimated unit cost information from the vendors is not available for planning purposes.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13 **P-1 Line Item Number / Title:** 353020 / General Purpose Bombs **Aggregated Items Title:** 500LB GP Bomb Variants

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
500 LB Variants																				
(ED15) BLU-111 A/B 500LB GP BOMB	A		-	-	-	-	-	-	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
(485) MK-82 500LB GP BOMB, Tritonal	A		-	-	-	0.005	23,495	126.874	0.005	7,428	40.109	-	-	0.000	-	-	-	-	-	0.000
BLU-111 500LB Penetrator (UON)	A		-	-	-	0.044	1,642	71.630	0.056	1,075	59.762	0.051	1,016	51.816	-	-	-	0.051	1,016	51.816
Subtotal: 500 LB Variants			-	-	-	-	-	198.504	-	-	99.871	-	-	51.816	-	-	-	-	-	51.816
Total			-	-	-	-	-	198.504	-	-	99.871	-	-	51.816	-	-	-	-	-	51.816

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:
 BLU-111 AUR unit cost for FY20 is \$40,448 per bomb; FY21 is \$51,624 per bomb; FY22 is \$52,282 per bomb. BLU-111 has other government costs which make up the Delta in the funding line.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13 **P-1 Line Item Number / Title:** 353020 / General Purpose Bombs **Aggregated Items Title:** 2000LB Hard Target Penetrator Variants

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
2000LB Hard Target Penetrator Variants																				
(F140) BLU-109/B 2000LB Penetrator, Tritonal	A		-	-	-	-	-	0.000	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
(ED49) BLU-109C/B IM, 2000LB Penetrator	A		-	-	-	-	-	0.000	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
BLU-137/A2K	A		-	-	-	0.082	1,040	85.024	0.068	1,040	70.590	0.061	550	33.600	-	-	-	0.061	550	33.600
Subtotal: 2000LB Hard Target Penetrator Variants			-	-	-	-	-	85.024	-	-	70.590	-	-	33.600	-	-	-	-	-	33.600
Total			-	-	-	-	-	85.024	-	-	70.590	-	-	33.600	-	-	-	-	-	33.600

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:

A2K's actual AUR unit cost for FY20 is \$54,362 per bomb; FY21 is \$60,315 per bomb; FY22 is \$61,462 per bomb. A2K's has other government costs which make up the Delta in the funding line.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13	P-1 Line Item Number / Title: 353020 / General Purpose Bombs	Aggregated Items Title: (ED58) MAU-209C/B CCG
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
MAU-209C/B - ED58	A		-	-	-	0.008	3,679	28.820	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
Subtotal: Uncategorized			-	-	-	-	-	28.820	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
Total			-	-	-	-	-	28.820	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:

Prices shown reflect the average unit cost of split-award contracts plus inflation. Due to the competitive nature of the currently qualified vendors, estimated unit costs are not available for planning purposes.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13 **P-1 Line Item Number / Title:** 353020 / General Purpose Bombs **Aggregated Items Title:** 2000lbs GP Bombs Variants

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware																				
(ED09) BLU-117, 2000LB GP BOMB	A		-	-	-	-	-	0.000	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
(F275) MK-84, 2000LB GP BOMB, Tritonal	A		-	-	-	0.015	9,988	149.821	0.015	9,063	135.944	-	-	0.000	-	-	-	-	-	0.000
Subtotal: Hardware			-	-	-	-	-	149.821	-	-	135.944	-	-	0.000	-	-	-	-	-	0.000
Total			-	-	-	-	-	149.821	-	-	135.944	-	-	0.000	-	-	-	-	-	0.000

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13	P-1 Line Item Number / Title: 353020 / General Purpose Bombs	Aggregated Items Title: A5K (GBU-72)
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
GBU-72	A		-	-	-	-	-	-	-	-	-	0.288	125	36.000	-	-	-	0.288	125	36.000
Subtotal: Uncategorized			-	-	-	-	-	-	-	-	-	-	-	36.000	-	-	-	-	-	36.000
Total			-	-	-	-	-	-	-	-	-	-	-	36.000	-	-	-	-	-	36.000

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:

BLU-138 (GBU-72) A5K is a New Start for FY22.
 BLU-138 AUR unit cost for FY22 is \$202,981 per bomb.
 A5K has other government costs which make up the Delta in the funding line.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13	P-1 Line Item Number / Title: 353020 / General Purpose Bombs	Aggregated Items Title: BLU-134/B CDI 500LB
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
BLU-134/B, CDI 500 lb	A		-	-	-	0.009	4,555	41.000	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: Uncategorized			-	-	-	-	-	41.000	-	-	-	-	-	-	-	-	-	-	-	
Total			-	-	-	-	-	41.000	-	-	-	-	-	-	-	-	-	-	-	

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:

Next Generation Area Attack Weapons (NGAAWs) are a family of unitary area attack weapons which meet the DoD policy on cluster munitions. They consist of BLU-134/B and BLU-136/B warheads with a height of burst sensor.

BLU-134/B, Improved Lethality Warhead (ILW), NGAAW Increment I, is a 500 lb area attack warhead with improved lethality against personnel and materiel targets. The unitary warhead meets DoD policy on cluster munitions.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13	P-1 Line Item Number / Title: 353020 / General Purpose Bombs	Aggregated Items Title: BLU-136/B 2000LB GP BOMB
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
BLU-136/B, 2,000 lb.	A		-	-	0.000	0.181	125	22.683	0.276	125	34.548	0.048	900	43.189	-	-	-	0.048	900	43.189
Subtotal: Uncategorized			-	-	0.000	-	-	22.683	-	-	34.548	-	-	43.189	-	-	-	-	-	43.189
Total			-	-	0.000	-	-	22.683	-	-	34.548	-	-	43.189	-	-	-	-	-	43.189

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:

Next Generation Area Attack Weapons (NGAAWs) are a family of unitary area attack weapons which meet the DoD policy on cluster munitions. It consists of the BLU-134/B and BLU-136/B warheads with a cockpit-selectable height of burst sensor.

BLU-136/B, NGAAW Increment II, is a 2,000lb area attack warhead which, augmented by the BLU-134/B, provides for significant improvement of lethality against personnel and materiel targets while meeting the DoD policy on cluster munitions.

BLU-136/B unit cost for FY20 is \$55,711 per bomb; FY21 is \$55,375; FY22 is \$40,819 per bomb.
BLU-136/B has other government costs which make up the Delta in the funding line.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force															Date: May 2021				
Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13							P-1 Line Item Number / Title: 353020 / General Purpose Bombs							Aggregated Items Title: GENERAL PURPOSE BOMBS (ITEMS LESS THAN \$5 MILLION)					

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
FEM Conversion	A		-	-	-	-	-	17.000	-	-	-	-	-	0.000	-	-	-	-	-	0.000
MXU-651 AFG, GBU-10 (EC31)	A		-	-	-	-	-	1.800	-	-	-	-	-	0.000	-	-	-	-	-	0.000
Facilitization	A		-	-	-	-	-	23.460	-	-	0.000	-	-	-	-	-	-	-	-	-
BOMB FUZE PROTECTION ASSEMBLY (ED67)	A		-	-	-	-	-	0.500	-	-	0.500	-	-	0.000	-	-	-	-	-	0.000
MK84 FIN ASSEMBLY (F607)	A		-	-	-	-	-	1.000	-	-	1.000	-	-	0.000	-	-	-	-	-	0.000
FIN ASSY BSU-33B/ B (EE10)	A		-	-	-	-	-	3.000	-	-	3.000	-	-	0.000	-	-	-	-	-	0.000
(ED41) BLU-110B/B GENERAL PURPOSE BOMB	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IM	A		-	-	-	-	-	5.500	-	-	5.500	-	-	0.000	-	-	-	-	-	0.000
LWIP	A		-	-	-	-	-	3.000	-	-	3.000	-	-	0.000	-	-	-	-	-	0.000
WEAPS/IMEA	A		-	-	-	-	-	5.755	-	-	1.400	-	-	3.300	-	-	-	-	-	3.300
First Destination Transportation Costs	A		-	-	-	-	-	6.300	-	-	4.500	-	-	2.000	-	-	-	-	-	2.000
Support Cups	A		-	-	-	-	-	1.500	-	-	1.500	-	-	0.000	-	-	-	-	-	0.000
Nose Plugs	A		-	-	-	-	-	2.000	-	-	2.200	-	-	0.000	-	-	-	-	-	0.000
PMA OTHER GOVERNMENT COSTS	A		-	-	-	-	-	1.000	-	-	6.013	-	-	6.660	-	-	-	-	-	6.660
Subtotal: Uncategorized			-	-	-	-	-	71.815	-	-	28.613	-	-	11.960	-	-	-	-	-	11.960
Total			-	-	-	-	-	71.815	-	-	28.613	-	-	11.960	-	-	-	-	-	11.960

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 13: Bombs	P-1 Line Item Number / Title: 353190 / Massive Ordnance Penetrator (MOP)
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604327F
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Line Item MDAP/MAIS Code: 527

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	0.000	0.000	15.500	-	15.500	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	0.000	0.000	15.500	-	15.500	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	0.000	0.000	15.500	-	15.500	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Massive Ordnance Penetrator (MOP) is a 30,000 lb class precision-guided penetrator designed to defeat hard and deeply buried targets.

Funding may be used for non-recurring engineering, integration, test, qualification, production readiness and operational readiness of engineering change proposals to resolve safety, reliability or other operational deficiencies, decrease weapon system cost, preserve future production capabilities and capacities, and meet Congressional, National Agency and Defense Department mandates. For example, the integration of Military Code (M-Code) receivers with Enhanced Anti-Jam (EAJ) in order to provide advanced Positioning, Navigation, and Timing (PNT) capabilities to allow operations in anti-access/area denial (A2/AD) environments. M-Code and EAJ also provide increased accuracy, better signal acquisition, and advanced security.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues. For example through studies, bridge buys, life of type buys, supplier/parts replacement, to include electronic components used commercially and in short supply, energetics, and qualification activities to preserve future production capabilities and capacities.

This requirement supports performance of a full financial audit as required by title 10 U.S.C. Chapter 9A, Sec 240-D.

Funding for this exhibit is contained in PE 0208030F, project 353190.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 13: Bombs **P-1 Line Item Number / Title:** 353190 / Massive Ordnance Penetrator (MOP)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604327F

Line Item MDAP/MAIS Code: 527

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)					
P-5	Massive Ordnance Penetrator (MOP)		A		- / -	- / 0.000	- / 0.000	- / 15.500	- / -	- / 15.500
P-40	Total Gross/Weapon System Cost				- / -	- / 0.000	- / 0.000	- / 15.500	- / -	- / 15.500

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

This program is a new start.

FY22 funding includes integration of M-code and additional MOP assets to include warheads, guidance kits, fuzes, and associated support equipment.

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Exhibit P-5, Cost Analysis: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13	P-1 Line Item Number / Title: 353190 / Massive Ordnance Penetrator (MOP)	Item Number / Title [DODIC]: Massive Ordnance Penetrator (MOP)

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	-	0.000	0.000	15.500	-	15.500
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	-	0.000	0.000	15.500	-	15.500
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	-	0.000	0.000	15.500	-	15.500

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - Massive Ordnance Penetrator (MOP) Cost																		
Recurring Cost																		
MOP Equipment	-	-	-	-	-	0.000	-	-	0.000	-	-	14.800	-	-	-	-	-	14.800
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	0.000	-	-	0.000	-	-	14.800	-	-	-	-	-	14.800
<i>Subtotal: Hardware - Massive Ordnance Penetrator (MOP) Cost</i>	-	-	-	-	-	0.000	-	-	0.000	-	-	14.800	-	-	-	-	-	14.800
Support - Massive Ordnance Penetrator (MOP) Cost																		
PMA Other Government Costs	-	-	-	-	-	-	-	-	-	-	-	0.700	-	-	-	-	-	0.700
<i>Subtotal: Support - Massive Ordnance Penetrator (MOP) Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.700	-	-	-	-	-	0.700
Gross/Weapon System Cost	-	-	-	-	-	0.000	-	-	0.000	-	-	15.500	-	-	-	-	-	15.500

Remarks:

PMA Other Government Costs: Travel, Government Purchase Card (GPC)

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 13: Bombs	P-1 Line Item Number / Title: 353620 / Joint Direct Attack Munition
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: 503

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	313,869	24,794	16,800	1,919	-	1,919	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	7,613.431	1,034.224	459.712	124.102	-	124.102	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	7,613.431	1,034.224	459.712	124.102	-	124.102	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	7,613.431	1,034.224	459.712	124.102	-	124.102	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	0.024	0.042	0.027	0.065	-	0.065	-	-	-	-	-	-

Description:

FY21 funding totals include \$237.723M appropriated for Overseas Contingency Operations (OCO).

FY22 funding totals include \$68.222M requested for Direct War costs.

The Joint Direct Attack Munition (JDAM) program is a joint Air Force/Navy program with the Air Force as the lead service. Designated ACAT 1C, this program upgrades the existing inventory of general purpose bombs by integrating the bombs with a field installed guidance kit using a Global Positioning System-aided Inertial Navigation System (GPS/INS). JDAM provides an accurate, adverse weather capability. JDAM is integrated with the B-52H, B-2A, B-1B, F-16 (all variants), F/A-18A+/C/D/E/F, F-15E, AV-8B, A-10C and F-22A aircraft. Integration with the MQ-9 and F-35 are in progress.

Under an Urgent Operational Need (UON), the Air Force is procuring Strategic Anti-Jam Beamforming Receiver Y-Code (SABR-Y) guidance kits which are enhanced GPS-denied environment guidance systems. Unit costs increased with SABR-Y GPS receivers starting in FY19. Leveraging the SABR-Y follow-on requirement, the Air Force is developing M-Code (SABR-M) capable guidance kits to meet section 913 of the National Defense Authorization Act for FY 2011 (Public Law 111-383) M-Code GPS requirements and is targeting FY23 award to Lot 27 for production. The M-Code Phase 3 project is integrating the Anti-Jam Application Specific Integrated Circuit (AJ ASIC) based M-Code Enhanced Anti-Jam Receiver (EAJR) JDAM onto representative launch platform(s). This effort focuses on qualification and testing of production representative M-Code weapon system hardware and software along with planning for the transition to production.

Pursuant to section 2308 of Title 10, U.S. Code, this program will seek cost efficiencies where available through production lot negotiations. This program will continue procurement past FY2026 due to evolving warfighter requirements driven by ongoing combat expenditures.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues. Through studies, bridge buys, life of type buys, supplier/parts replacement, to include electronic components used commercially and in short supply; and qualification activities to preserve future production capabilities and capacities.

The FY2022 funding request was reduced by 270.928M to account for the availability of prior year execution balances.

Funding for this exhibit is contained in PE 0207583F.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 13: Bombs

P-1 Line Item Number / Title:
353620 / Joint Direct Attack Munition

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 503

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	Joint Direct Attack Munition	P-5a, P-21	A		313,869 / 7,613.431	24,794 / 1,034.224	16,800 / 459.712	1,919 / 124.102	- / -	1,919 / 124.102
P-40	Total Gross/Weapon System Cost				313,869 / 7,613.431	24,794 / 1,034.224	16,800 / 459.712	1,919 / 124.102	- / -	1,919 / 124.102

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY22 budget request will procure 1919 JDAM guidance kits, to include 1734 JDAM guidance kits procured for Direct War Requirements, needed to replenish operational expenditures.

Unit costs increase in FY2020, FY2021, and FY2022 while SABR-Y assets are procured.

This program procures JDAM guidance kits, laser sensors, airborne test equipment, and supporting activities to include software block upgrades, integration, and other technical services. The hardware purchase includes a mixture of JDAM guidance kits as well as precision laser guidance sensors, and airborne test equipment for flight test.

This procurement is critical to replenish stockpiles supporting on-going warfighter missions in which JDAM comprises the majority of combat expenditures.

Procurement quantities can change based on negotiated options/pricing curves and available funding, in accordance with Title 10, U.S. Code Section 2308 BUY-TO-BUDGET ACQUISITION.

Note: Budgeted quantities should be 23490 for FY20. Based on current cost estimates, quantities should be 9909 for FY21.

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Exhibit P-5, Cost Analysis: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13	P-1 Line Item Number / Title: 353620 / Joint Direct Attack Munition	Item Number / Title [DODIC]: Joint Direct Attack Munition

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)	313,869	24,794	16,800	1,919	-	1,919
Gross/Weapon System Cost (\$ in Millions)	7,613.431	1,034.224	459.712	124.102	-	124.102
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	7,613.431	1,034.224	459.712	124.102	-	124.102
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	7,613.431	1,034.224	459.712	124.102	-	124.102

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	0.024	0.042	0.027	0.065	-	0.065

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - END ITEM Cost																		
Recurring Cost																		
JDAM TAIL KIT ⁽¹⁾	0.022	313,869	6,940.903	0.035	24,794	879.872	0.023	16,800	389.885	0.039	1,919	75.518	-	-	-	0.039	1,919	75.518
LASER SENSOR	0.013	27,299	346.565	0.014	4,533	62.820	0.018	3,000	53.334	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	7,287.468	-	-	942.692	-	-	443.219	-	-	75.518	-	-	0.000	-	-	75.518
<i>Subtotal: Hardware - END ITEM Cost</i>	-	-	7,287.468	-	-	942.692	-	-	443.219	-	-	75.518	-	-	0.000	-	-	75.518
Ancillary Equipment - TEST EQUIPMENT Cost																		
Recurring Cost																		
AIRBORNE TEST EQUIPMENT	-	-	101.212	-	-	3.822	-	-	1.207	-	-	11.392	-	-	0.000	-	-	11.392
<i>Subtotal: Recurring Cost</i>	-	-	101.212	-	-	3.822	-	-	1.207	-	-	11.392	-	-	0.000	-	-	11.392
<i>Subtotal: Ancillary Equipment - TEST EQUIPMENT Cost</i>	-	-	101.212	-	-	3.822	-	-	1.207	-	-	11.392	-	-	0.000	-	-	11.392
Support - END ITEM SUPPORT Cost																		
PROGRAM MANAGEMENT ADMINISTRATION	-	-	53.366	-	-	4.368	-	-	3.876	-	-	4.755	-	-	0.000	-	-	4.755
PRODUCTION SUSTAINING ENGINEERING	-	-	171.385	-	-	83.342	-	-	11.410	-	-	32.437	-	-	0.000	-	-	32.437
<i>Subtotal: Support - END ITEM SUPPORT Cost</i>	-	-	224.751	-	-	87.710	-	-	15.286	-	-	37.192	-	-	0.000	-	-	37.192

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Exhibit P-5, Cost Analysis: PB 2022 Air Force												Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13						P-1 Line Item Number / Title: 353620 / Joint Direct Attack Munition						Item Number / Title [DODIC]: Joint Direct Attack Munition					
ID Code (A=Service Ready, B=Not Service Ready) : A												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	0.024	313,869	7,613.431	0.042	24,794	1,034.224	0.027	16,800	459.712	0.065	1,919	124.102	-	-	-	0.065	1,919	124.102

Remarks:

Budgeted JDAM guidance kit quantities should be 23490 for FY20 with a unit cost of \$0.037M. Based on the most recent cost estimates, quantities should be 9909 for FY21 with a unit cost of \$0.039M.

Increased funding for Airborne Test Equipment will be used to procure the next generation HCTM (High Bandwidth Compact Telemetry kits). FY22 will be the first year of production of the new variant, funds will be used to procure an estimated 200 TM kits with associated accessories.

Increased funding for Production Sustaining Engineering will be used for integration of the ASIC and M-Code FPGA. Also associated systems test and evaluation cost for block 12S and M-code integration.

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13	P-1 Line Item Number / Title: 353620 / Joint Direct Attack Munition	Item Number / Title [DODIC]: Joint Direct Attack Munition
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ M)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
JDAM TAIL KIT ^(†)		2020	BOEING / ST CHARLES, MO	SS / FFP	AFLCMC Hill AFB	Feb 2020	Feb 2021	24,794	0.035	Y		Aug 2017
JDAM TAIL KIT ^(†)		2021	BOEING / ST CHARLES, MO	SS / FFP	AFLCMC Hill AFB	Feb 2022	Feb 2023	16,800	0.023	Y		Aug 2017
JDAM TAIL KIT ^(†)		2022	BOEING / ST CHARLES, MO	SS / FFP	AFLCMC Hill AFB	Feb 2022	Feb 2023	1,919	0.039	Y		Aug 2017

^(†) indicates the presence of a P-21

Remarks:

FY2021 and FY2022 JDAM guidance kit increased unit costs include the SABR-Y upgraded GPS receiver and the modified JDAM guidance kit hardback design used for the BLU-137 penetrator warhead.

The Air Force is developing the BLU-137 which is a modernized 2,000-lb. penetrator warhead. The BLU-137 will increase fuze survivability when used against bunkers, aircraft shelters, and reinforced targets.

Under an Urgent Operational Need (UON), the Air Force is procuring Strategic Anti-Jam Beamforming Receiver Y-Code (SABR-Y) guidance kits which are enhanced GPS-denied environment guidance systems. As a stop-gap capability, the Air Force is working to procure SABR-Y as a follow-on requirement until M-Code integration is achieved. The SABR-Y guidance kit will increase anti-jam capabilities in GPS degraded theaters, and leverages existing JDAM guidance kit designs.

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Exhibit P-21, Production Schedule: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13 **P-1 Line Item Number / Title:** 353620 / Joint Direct Attack Munition **Item Number / Title [DODIC]:** Joint Direct Attack Munition

Cost Elements <i>(Units in Thousands)</i>				Fiscal Year 2022														Fiscal Year 2023												BALANCE				
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022														Calendar Year 2023													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P			
JDAM TAIL KIT																																		
Prior Years Deliveries: 313869																																		
	1	2020	AF	24.794	16.528	8.266	2.066	2.066	2.067	2.067																							.000	
	1	2020	FMS (+)	1.533	1.024	.509	.128	.127	.127	.127																							.000	
	1	2020	NAVY (+)	3.228	2.152	1.076	.269	.269	.269	.269																							.000	
	1	2020	Total	29.555	19.704	9.851	2.463	2.462	2.463	2.463	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000		
	1	2021	AF	16.800	.000	16.800					A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.600		
	1	2021	FMS (+)	3.368	.000	3.368					A.281	.281	.281	.281	.281	.281	.281	.281	.281	.280	.280	.280	.280	-	-	-	-	-	-	-	-	.000		
	1	2021	NAVY (+)	3.271	.000	3.271					A.273	.273	.273	.273	.273	.273	.273	.272	.272	.272	.272	.272	.272	-	-	-	-	-	-	-	-	.000		
	1	2021	Total	23.439	.000	23.439					.554	.553	.552	.552	.552	.552	.552	1.400	5.600															
	1	2022	AF	1.919	.000	1.919					A	-	-	-	-	-	-	-	-	-	-	-	-	.160	.160	.160	.160	.160	.160	.160	.160	.639		
	1	2022	FMS (+)	3.650	.000	3.650					A	-	-	-	-	-	-	-	-	-	-	-	-	.304	.304	.304	.304	.304	.304	.304	.304	1.218		
	1	2022	NAVY (+)	2.971	.000	2.971					A	-	-	-	-	-	-	-	-	-	-	-	-	.248	.248	.248	.248	.248	.248	.248	.247	.988		
	1	2022	Total	8.540	.000	8.540					-	-	-	-	-	-	.712	.711	2.845															
											O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P

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Exhibit P-21, Production Schedule: PB 2022 Air Force	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13	P-1 Line Item Number / Title: 353620 / Joint Direct Attack Munition	Item Number / Title [DODIC]: Joint Direct Attack Munition
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2022	1-8-5 For 2022	MAX For 2022	Initial				Reorder				
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	
1	BOEING - ST CHARLES, MO	10,500	18,900	45,000	0	0	0	0	0	0	5	12	17

Remarks:

Minimum Sustainment Rate (MSR) includes US Air Force, US Navy and Foreign Military Sales (FMS) procurement.

(±) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 13: Bombs	P-1 Line Item Number / Title: 354040 / B-61
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0101125F	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: 468

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	280	593	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	172.831	55.531	35.634	2.709	-	2.709	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	11.239	0.242	0.000	0.000	-	0.000	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	161.592	55.289	35.634	2.709	-	2.709	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	65.413	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	227.005	55.289	35.634	2.709	-	2.709	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	0.617	0.094	-	-	-	-	-	-	-	-	-	-

Description:

The purpose of this program is to conduct and support United States Air Force (USAF) and Joint Department of Defense (DoD) / Department of Energy (DOE) acquisition activities for the modernization of nuclear weapons.

B61-12 Life Extension Program (LEP): The B61-12 LEP will integrate DOE efforts to extend the service life of the warhead with DoD efforts to develop a guided Tail Kit Assembly (TKA) required to maintain current B61 mission characteristics. Programmatic integration of the Air Force-led, joint DoD-DOE program is accomplished through the B61 LEP Project Officers Group (POG) and its subgroups. In accordance with Air Force Materiel Command mission assignment memo (dated 17 Feb 11) and National Nuclear Security Administration (NNSA)-Air Force Nuclear Weapons Center (AFNWC) Memorandum of Understanding (MOU, dated 28 Jun 12), the USAF is responsible for development, acquisition and delivery of a guided TKA and for All Up Round (AUR) technical integration, system qualification and fielding of the B61-12 variant on multiple platforms. The production effort for the B61 TKA includes the production and delivery of TKAs, accessories, spares, ancillary equipment, Code Management System equipment, TKA and AUR trainers, lot acceptance test assets, and support. The B61 Developmental Test program is complete. Milestone C approved October 2018; the Milestone Decision Authority (MDA) approved proceeding into LRIP/Lot 1, as well as Lot 2 Advanced Procurement in support of Full Rate Production. Initial Operational Test and Evaluation activities were completed in 1QFY20; the DOT&E Beyond Low Rate Initial Production final report was published in September 2020. The Full Rate Production decision was approved by the MDA on 19 Oct 20, which included an additional 60 units to fulfill the 90/10/2 surveillance requirements.

The program also plans to use some funds to evaluate Diminishing Manufacturing Sources (DMS) material shortages, obsolescence issues, and reliability improvement, including flight testing.

1.685M in Prior Years (FY16) advance procurement funds were not subtracted in a subsequent year, thereby causing the total Less PY Advance Procurement figure to be in error by 1.685M in the Resource Summary table; this error carries across to the Total column. The Total Obligation Authority for 3011 funds should be 321.121M.

Due to a database transfer error, the FY2020 column data on the P-40 Resource Summary table are incorrect. FY2020 should read:

- Gross/Weapons System Cost: 108.262M
- Less PY Advance Procurement: 52.489M
- Net Procurement: 55.773M
- Plus CY Advance Procurement: 0.000M
- Total Obligation Authority: 55.773M

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 13: Bombs		P-1 Line Item Number / Title: 354040 / B-61
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0101125F	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: 468		

Due the aforementioned database transfer error, Gross/Weapon System Cost data does not match Resource Summary data.

The Hardware Recurring B61 End Item (TKA) and Hardware Recurring B61 TKA Trainers "Include in P5A" checkmark is selected to ensure delivery totals will be accurately reflected on the P-21 exhibits.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 13: Bombs **P-1 Line Item Number / Title:** 354040 / B-61

ID Code (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0101125F **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 468

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B-61	P-5a, P-21	B		280 / 172.831	593 / 55.531	- / 35.634	- / 2.709	- / -	- / 2.709
P-40	Total Gross/Weapon System Cost				280 / 172.831	593 / 55.531	- / 35.634	- / 2.709	- / -	- / 2.709

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

The B61-12 LEP TKA program is in Full Rate Production and executing contracts for build and delivery of two production lots.

Fiscal Year 2021/2022 funds will be applied to contract closeout costs, non-recurring costs for transition to sustainment, ancillary equipment such as bomb assembly trainers purchased from DoE/NNSA, and program management administration costs.

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Exhibit P-5, Cost Analysis: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13	P-1 Line Item Number / Title: 354040 / B-61	Item Number / Title [DODIC]: B-61

ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)	280	593	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	172.831	55.531	35.634	2.709	-	2.709
Less PY Advance Procurement (\$ in Millions)	11.239	0.242	0.000	0.000	-	0.000
Net Procurement (P-1) (\$ in Millions)	161.592	55.289	35.634	2.709	-	2.709
Plus CY Advance Procurement (\$ in Millions)	65.413	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	227.005	55.289	35.634	2.709	-	2.709

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	0.000	0.000	0.000	0.000	-	0.000
Gross/Weapon System Unit Cost (\$ in Millions)	0.617	0.094	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - B61 Cost																		
Recurring Cost																		
Hardware End Item (TKA) ^(†)	0.232	206	47.852	0.037	548	20.124	-	-	12.432	-	-	0.000	-	-	-	-	-	0.000
TKA Trainers ^(†)	0.134	74	9.936	0.007	45	0.302	-	-	0.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	57.788	-	-	20.426	-	-	12.432	-	-	0.000	-	-	-	-	-	0.000
<i>Subtotal: Hardware - B61 Cost</i>	-	-	57.788	-	-	20.426	-	-	12.432	-	-	0.000	-	-	-	-	-	0.000
Logistics - B61 Cost																		
Non Recurring Cost																		
CMS	-	-	29.588	-	-	5.702	-	-	0.100	-	-	-	-	-	-	-	-	-
Technical Data	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	29.588	-	-	5.702	-	-	0.100	-	-	-	-	-	-	-	-	-
<i>Subtotal: Logistics - B61 Cost</i>	-	-	29.588	-	-	5.702	-	-	0.100	-	-	-	-	-	-	-	-	-
Ancillary Equipment - B61 Cost																		
Recurring Cost																		
TKA Containers	-	-	0.440	-	-	2.085	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	0.440	-	-	2.085	-	-	-	-	-	-	-	-	-	-	-	-
Non Recurring Cost																		
Bomb Assembly (BA) Trainers	-	-	60.985	-	-	17.951	-	-	5.280	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2022 Air Force												Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13						P-1 Line Item Number / Title: 354040 / B-61						Item Number / Title [DODIC]: B-61					
ID Code (A=Service Ready, B=Not Service Ready) : B												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Test Equipment (SATS)	-	-	2.726	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-
T&H Gear	-	-	14.765	-	-	1.500	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	78.476	-	-	19.451	-	-	5.280	-	-	-	-	-	-	-	-	-
<i>Subtotal: Ancillary Equipment - B61 Cost</i>	-	-	78.916	-	-	21.536	-	-	5.280	-	-	-	-	-	-	-	-	-
Support - B61 Cost																		
PMA	-	-	3.663	-	-	0.148	-	-	2.433	-	-	2.644	-	-	-	-	-	2.644
NWC Mission Support	-	-	-	-	-	0.000	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
System T&E	-	-	0.092	-	-	5.003	-	-	15.389	-	-	0.065	-	-	-	-	-	0.065
Training	-	-	-	-	-	0.000	-	-	0.000	-	-	-	-	-	-	-	-	-
Production Sustaining Engineering	-	-	2.784	-	-	2.716	-	-	0.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - B61 Cost</i>	-	-	6.539	-	-	7.867	-	-	17.822	-	-	2.709	-	-	-	-	-	2.709
Gross/Weapon System Cost	0.617	280	172.831	0.094	593	55.531	-	-	35.634	-	-	2.709	-	-	-	-	-	2.709

Remarks:

A 5M ATR was being processed in May 2021, as part of the FY20 AF Omnibus request. Funds are currently held in the System T&E line and will be withdrawn in FY21/Q3.

1.685M in Prior Years (FY16) advance procurement funds were not subtracted in a subsequent year, thereby causing the total Less PY Advance Procurement figure to be in error by 1.685M in the Resource Summary table; this error carries across to the Total column. The Total Obligation Authority for 3011 funds should be 321.121M.

Due to a database transfer error, the FY2020 column data on the P-40 Resource Summary table are incorrect. FY2020 should read:

- Gross/Weapons System Cost: 108.262M
- Less PY Advance Procurement: 52.489M
- Net Procurement: 55.773M
- Plus CY Advance Procurement: 0.000M
- Total Obligation Authority: 55.773M

Due the aforementioned database transfer error, Gross/Weapon System Cost data does not match Resource Summary data.

The Hardware Recurring B61 End Item (TKA) and Hardware Recurring B61 TKA Trainers "Include in P5A" checkmark is selected to ensure delivery totals will be accurately reflected on the P-21 exhibits.

(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13	P-1 Line Item Number / Title: 354040 / B-61	Item Number / Title [DODIC]: B-61
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ M)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Hardware End Item (TKA) ^(†)		2020	Boeing / Various	SS / FPIF	Eglin AFB	Jun 2020	Aug 2021	548	0.037	N	Feb 2019	Dec 2017
TKA Trainers ^(†)		2020	Boeing / Various	SS / FPIF	Eglin AFB	Jun 2020	Mar 2021	45	0.007	N	Feb 2019	Oct 2017

^(†) indicates the presence of a P-21

Remarks:
The hardware end items consist of 544 Lot 2 TKAs. The TKA Trainers consist of 45 Trainers and 4 cutaway Trainers.

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Exhibit P-21, Production Schedule: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13 **P-1 Line Item Number / Title:** 354040 / B-61 **Item Number / Title [DODIC]:** B-61

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020												Fiscal Year 2021												BALANCE				
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P			
Hardware End Item (TKA)																																		
Prior Years Deliveries: 206																																		
1	2020	AF		548	0	548																								92	-	456		
TKA Trainers																																		
Prior Years Deliveries: 74																																		
2	2020	AF		45	0	45																								12	-	-	33	0
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13	P-1 Line Item Number / Title: 354040 / B-61	Item Number / Title [DODIC]: B-61
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Cost Elements <i>(Units in Each)</i>				Fiscal Year 2022														Fiscal Year 2023														BALANCE			
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022														Calendar Year 2023														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
Hardware End Item (TKA)																																			
Prior Years Deliveries: 206																																			
1	2020	AF		548	92	456	-	-	146	-	120	-	-	-	186																			4	
TKA Trainers																																			
Prior Years Deliveries: 74																																			
2	2020	AF		45	45	0																											0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2022 Air Force	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 13	P-1 Line Item Number / Title: 354040 / B-61	Item Number / Title [DODIC]: B-61
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)								
		MSR For 2022	1-8-5 For 2022	MAX For 2022	Initial				Reorder				
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	
1	Boeing - Various	544	550	550	0	0	0	0	0	0	9	14	23
2	Boeing - Various	45	50	50	0	0	0	0	0	0	9	9	18

Remarks:
The hardware end items consist of 544 Lot 2 TKAs. The TKA Trainers consist of 45 Trainers and 4 cutaway Trainers.

"A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 15: Other Items **P-1 Line Item Number / Title:** 355100 / Cad/Pad

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	56.482	47.830	47.210	-	47.210	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	56.482	47.830	47.210	-	47.210	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	56.482	47.830	47.210	-	47.210	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

- Cartridge Actuated Devices/Propellant Actuated Devices (CAD/PAD) are energetic life-limited critical safety items used in emergency egress, fire suppression, aerial refueling, data destruction, aircrew flight equipment and survival equipment. CAD/PAD items are used in all mission areas, i.e. combat, training, force protection, search & rescue, and humanitarian relief. These energetic devices have a defined shelf/service life and are replaced based on time-change during scheduled aircraft maintenance. The CAD/PAD category supports 1,100+ distinct National Stock Numbers used on the following airframes: A-10, AC-130, B-1, B-2, B-52, C-5, C-17, C-130, CV-22, E-3, E-8, EC-130, F-15, F-16, F-22, HC-130, HH-60, KC-10, KC-46, KC-135, LC-130, MC-130, NC-136, OC-135, QF-16, RC-135, T-1, T-6, T-38, TE-8, TU-2, U-2, UH-1, WC-130, and WC-135.

- Funds may be used to address production Diminishing Manufacturing Sources (DMS)/Material Shortages/Obsolescence issues through studies, bridge buys, life of type buys, supplier/parts replacement, to include electronic components used commercially and in short supply, and qualification activities to preserve future production capabilities and capacities.

- CAD/PAD items are purchased for AF by AFLCMC/EBHJ, CAD/PAD Joint Program Office at Hill AFB, UT.

- Funding for this exhibit contained in PE 0708070F.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 15: Other Items **P-1 Line Item Number / Title:** 355100 / Cad/Pad

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	Cad/Pad				- / -	- / 56.482	- / 47.830	- / 47.210	- / -	- / 47.210
P-40	Total Gross/Weapon System Cost				- / -	- / 56.482	- / 47.830	- / 47.210	- / -	- / 47.210

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY2022 funds will be used to maintain Aircraft operational availability and pilot safety. CAD/PAD assets expire due to established item shelf/service life, or mandatory "time-change" procedures for installed devices. In accordance with Technical Order (T.O.) 00-20-1, the aircraft becomes grounded until reliable assets are obtained and installed.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 15 **P-1 Line Item Number / Title:** 355100 / Cad/Pad **Aggregated Items Title:** Cad/Pad

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
BOMBER AIRCRAFT	A		-	-	-	-	-	6.000	-	-	7.000	-	-	7.515	-	-	-	-	-	7.515
CARGO AIRCRAFT	A		-	-	-	-	-	12.000	-	-	13.000	-	-	6.900	-	-	-	-	-	6.900
FIGHTER AIRCRAFT	A		-	-	-	-	-	8.869	-	-	10.000	-	-	3.303	-	-	-	-	-	3.303
TRAINING AIRCRAFT	A		-	-	-	-	-	22.413	-	-	11.000	-	-	12.893	-	-	-	-	-	12.893
COMMON EGRESS ITEMS	A		-	-	-	-	-	5.000	-	-	4.000	-	-	11.422	-	-	-	-	-	11.422
COMMON LIFE SUPPORT ITEMS	A		-	-	-	-	-	2.000	-	-	2.680	-	-	3.005	-	-	-	-	-	3.005
COMMON MISC ITEMS	A		-	-	-	-	-	0.200	-	-	0.150	-	-	2.172	-	-	-	-	-	2.172
Subtotal: Uncategorized			-	-	-	-	-	56.482	-	-	47.830	-	-	47.210	-	-	-	-	-	47.210
Total			-	-	-	-	-	56.482	-	-	47.830	-	-	47.210	-	-	-	-	-	47.210

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 15: Other Items **P-1 Line Item Number / Title:**
 355450 / Explosive Ordnance Disposal (EOD)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	6.182	6.232	6.151	-	6.151	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	6.182	6.232	6.151	-	6.151	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	6.182	6.232	6.151	-	6.151	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Explosive Ordnance Disposal (EOD) materials support Civil Engineer, EOD, Security Forces Military Working Dogs, RED HORSE, Special Forces operations and training, and formal schools with demolition munitions. The materials are used in deployment packages, base response assets and range clearance resources in support of peacetime and contingency operations. These items are certified for use by the Air Force Non-Nuclear Munitions Safety Board (NNMSB) and the Department of Defense Explosives Safety Board (DDESB).

Funds may be used to address production Diminishing Manufacturing Sources (DMS)/Material Shortages/Obsolescence issues through studies, bridge buys, life of type buys, supplier/parts replacement, to include electronic components used commercially and in short supply, and qualification activities to preserve future production capabilities and capacities.

The Air Force procures munitions to maintain appropriate quantities in the War Reserve Materiel (WRM) Munitions and test and training stockpiles. Active, Guard and Reserve components draw from the WRM stockpiles as required and receive test and training allocations annually based on current-year requirements.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

Funding for this exhibit is contained in PE 0204424F.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 15: Other Items

P-1 Line Item Number / Title:
355450 / Explosive Ordnance Disposal (EOD)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)					
P-40a	Explosive Ordnance Disposal (EOD)				- / -	- / 6.182	- / 6.232	- / 6.151	- / -	- / 6.151
P-40	Total Gross/Weapon System Cost				- / -	- / 6.182	- / 6.232	- / 6.151	- / -	- / 6.151

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY2022 funds purchase Explosive Ordnance Disposal (EOD), Demolition Material, Civil Engineering Tools and Equipment including all explosives, explosive tools and related equipment to render unexploded ordnance safe. Assets provide support for Counter Improvised Explosive Devices (IED) operations, Special Operations teams, formal schools, and Military Working Dog training. EOD/Demolition Munitions items are used in deployment packages, base response assets, and range clearance resources in support of peacetime and contingency operations.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force															Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 15					P-1 Line Item Number / Title: 355450 / Explosive Ordnance Disposal (EOD)										Aggregated Items Title: Explosive Ordnance Disposal (EOD)					
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
(AA62) 12 GAUGE M274 ULTRA CARTRIDGE	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
(M023) - CHARGE, DEMOLITION C4-M112	A		-	-	-	0.000	23,908	0.983	0.000	24,319	1.000	0.000	22,442	1.000	-	-	-	0.000	22,442	1.000
(M031) CHG DEMO TNT 1/2LB	A		-	-	-	-	-	-	-	-	-	0.000	50,637	1.193	-	-	-	0.000	50,637	1.193
(M097) INERT, NON-ELECTRIC CAP	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(M130) - CAP BLASTING ELECTRIC M6	A		-	-	-	0.000	8,276	0.300	0.000	8,276	0.300	-	-	-	-	-	-	-	-	-
(DWEC) CTG, MK 277 ENHANCED BLANK	A		-	-	-	-	-	-	-	-	-	0.000	2,786	0.010	-	-	-	0.000	2,786	0.010
(M131) - CAP, BLASTING NON-ELECTRIC-M7	A		-	-	-	0.000	20,713	0.500	0.000	20,713	0.500	-	-	-	-	-	-	-	-	-
(M456) - CORD ASBLY DETONATING	A		-	-	-	0.000	232,558	0.100	-	-	-	-	-	-	-	-	-	-	-	-
(M591) - DYNAMITE MILITARY M1 1LB BLOCK	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(M980) - DETA SHEET	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(M993) CHARGE, DEMO, C1.5 DETA SHEET .062	A		-	-	-	0.000	861	0.309	-	-	-	-	-	-	-	-	-	-	-	-
(ML47) - B CAP W/30 FT SHOCK TUBE	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(MM24) DEMO ECT, MK 142, 300GPF	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(MM30) CHARGE, 20 GRAM MK 140 MOD 0	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(MM51) DEMO ECT, MK 143, 600GPF	A		-	-	-	0.000	816	0.100	-	-	-	-	-	-	-	-	-	-	-	-
(MM52) DEMO ECT, MK144, 1200GPF	A		-	-	-	0.000	3,498	0.312	-	-	-	-	-	-	-	-	-	-	-	-
(MM53) - DEMO ECT, MK145, 2400GPF	A		-	-	-	0.000	1,058	0.200	0.000	1,058	0.200	0.000	1,432	0.100	-	-	-	0.000	1,432	0.100
(MM54) - EXPLOSIVE CUTTING TAPE	A		-	-	-	0.000	5,389	0.500	0.000	2,156	0.200	-	-	-	-	-	-	-	-	-

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 15 **P-1 Line Item Number / Title:** 355450 / Explosive Ordnance Disposal (EOD) **Aggregated Items Title:** Explosive Ordnance Disposal (EOD)

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
(M421) CHG DEMO SHPD M3A2 COMP B	A		-	-	-	-	-	-	-	-	0.200	0.001	247	0.200	-	-	-	0.001	247	0.200
(MM56) DETONATOR, PERCUSSION 175MS DELAY	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(MN07) - N/E 70FT DELAY SHOCK TUBE	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(MN06) M14 SET UP, N/E CAP WITH TIME FUZE	A		-	-	-	0.000	15,638	0.152	-	-	-	0.000	25,489	0.300	-	-	-	0.000	25,489	0.300
(MN08) - IGNITER TIME BLASTING	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(MN23) - DEMO ECT, MK152, 900GPF (LHFLSC)	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(MN82) - SEMTEX A	A		-	-	-	0.000	3,348	0.100	-	-	-	-	-	-	-	-	-	-	-	-
(MN85) - DYNAMITE, 75% AMMON NITRATE	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(MN86) CAP, BLAST NON-ELEC W/200 FT MINI-TUBE M19	A		-	-	-	-	-	-	-	-	0.232	-	-	-	-	-	-	-	-	-
(MN88) - SHOCK TUBE W/BLASTING CAP 500	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(MN90) - M-13 1,000 FT SHOCK TUBE W/ CAP M23	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(MP29) DETONATOR, NONELEC, DUEL 40 FT MK 164 MOD 0	A		-	-	-	-	-	-	-	-	0.100	-	-	-	-	-	-	-	-	-
(SS01) - CTG, 50 CAL ELEC BLANK MK209 MOD 1	A		-	-	-	0.000	18,792	2.300	0.000	14,707	1.800	0.000	7,965	1.470	-	-	-	0.000	7,965	1.470
(M039) CHG DEMO 40LB CRATERING W/ WELL	A		-	-	-	-	-	-	-	-	0.100	-	-	-	-	-	-	-	-	-
(M670) FUZE, BLASTING TIME	A		-	-	-	0.000	882	0.120	-	-	-	0.000	211,290	0.131	-	-	-	0.000	211,290	0.131
(M420) CHG DEMO SHPD M2A4 15LB COMP B	A		-	-	-	-	-	-	-	-	1.400	0.002	726	1.394	-	-	-	0.002	726	1.394

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 15 **P-1 Line Item Number / Title:** 355450 / Explosive Ordnance Disposal (EOD) **Aggregated Items Title:** Explosive Ordnance Disposal (EOD)

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
(M986) CHB, DEMOLITION C7 DETA SHEET 1.333	A		-	-	-	0.000	306	0.100	-	-	-	-	-	-	-	-	-	-	-	
(YY34) - SHOCK TUBE	A		-	-	-	-	-	-	-	-	0.200	0.000	704	0.150	-	-	-	0.000	704	0.150
(M456) CORD ASSEMBLY, DETONATING	A		-	-	-	-	-	-	-	-	0.000	250,000	0.100	-	-	-	0.000	250,000	0.100	
(M482) CONTNR SHAP CHRNG, MK 7 MOD 6	A		-	-	-	-	-	-	-	-	0.000	719	0.030	-	-	-	0.000	719	0.030	
(ML05) CUTTER, HE MK 24 MOD 0	A		-	-	-	-	-	-	-	-	0.000	272	0.050	-	-	-	0.000	272	0.050	
(M981) CHARGE, DEMOLITION	A		-	-	-	-	-	-	-	-	0.000	898	0.020	-	-	-	0.000	898	0.020	
PMA	A		-	-	-	-	-	0.106	-	-	-	-	-	0.003	-	-	-	-	-	0.003
Subtotal: Uncategorized			-	-	-	-	-	6.182	-	-	6.232	-	-	6.151	-	-	-	-	-	6.151
Total			-	-	-	-	-	6.182	-	-	6.232	-	-	6.151	-	-	-	-	-	6.151

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 15: Other Items **P-1 Line Item Number / Title:**
355900 / Spares And Repair Parts

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	0.533	0.542	0.535	-	0.535	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	0.533	0.542	0.535	-	0.535	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	0.533	0.542	0.535	-	0.535	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This P-1 line funds spares and repair parts for Procurement of Ammunition, Air Force (PAAF) items. Initial spares consist of repairable components, assemblies and subassemblies, as well as consumable items required in support of newly fielded end items. Requirements are based on historical failure/demand data on similar items. Replenishment spares consist of repairable components, assemblies and subassemblies required for follow-on sustainment of end items. Munitions replenishment spare levels are based on item-specific failure/demand driven computations.

Provide Area Attack telemetry kit Weapon System Evaluation Program (WSEP) analysis for Wind Corrected Munitions Dispenser (WCMD). Contractor will perform engineering study, installation, delivery and testing for WCMD weapons with telemetry kits.

Funds may be used to address production Diminishing Manufacturing Sources (DMS)/Material Shortages/Obsolescence issues through studies, bridge buys, life of type buys, supplier/parts replacement, to include electronic components used commercially and in short supply, and qualification activities to preserve future production capabilities and capacities.

Funding for this exhibit contained in PE 0208030F.

Justification:

FY2022 funds are used for spares and repair parts for Procurement of Ammunition, Air Force (PAAF) items. Initial spares consist of repairable components, assemblies and sub-assemblies, as well as consumable items required in support of newly fielded end items. Requirements are based on historical failure/demand data on similar items. Replenishment spares consist of repairable components, assemblies and sub-assemblies required for follow on sustainment of end items. Munitions replacement spare levels are based on item-specific failure /demand driven computations. Examples of spares include Flight Test Telemetry packages, telemetry kits, batteries, fuzes, cables, electronic components to support and maintain fielded end items, and test support equipment. Initial or Replenishment spares and repair parts are necessary for the following Air Force (PAAF) P-1 end items: Rockets, Cartridges, Practice Bombs, General Purpose Bombs, Cartridge Actuated Devices /Propellant Actuated Devices (CAD/PAD), Explosive Ordinance Disposal, Flares, and Fuzes.

The Air Force procures munitions to maintain appropriate quantities in the War Reserve Material (WRM) Munitions and test and training stockpiles. Active, Guard and Reserve components draw from the WRM stockpiles as required and receive test and training allocations annually based on current-year requirements.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 15: Other Items
P-1 Line Item Number / Title: 355970 / Modifications

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	1.291	1.310	0.292	-	0.292	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	1.291	1.310	0.292	-	0.292	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	1.291	1.310	0.292	-	0.292	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

-The FY 2022 funding request was reduced by \$1.032M million to account for the availability of prior year execution balances.

This budget line encompasses both new and on-going modification efforts for guided bomb and munitions systems. Permanent modifications consist of configuration changes to in-service systems and equipment which correct material or other deficiencies and can be used to add or remove capability. Safety modifications correct deficiencies which may create personnel, system, or equipment hazards.

The Air Force procures munitions to maintain appropriate quantities in the War Reserve Materiel (WRM) munitions and test and training stockpiles. Active, Guard and Reserve components draw from the WRM stockpiles as required and receive test and training allocations annually based on current-year requirements.

Funds may be used to address production Diminishing Manufacturing Sources/Material Shortages/Obsolescence issues through studies, bridge buys, life of type buys, supplier/parts replacement, to include electronic components used commercially and in short supply, and qualification activities to preserve future production capabilities and capacities.

Funding for this exhibit contained in PE 0208030F.

Justification:

The FY2022 funding request is a low cost mod for guided bomb and munitions systems that reflects estimated costs based on historical funding requirements and projected future requirements.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 15: Other Items
P-1 Line Item Number / Title: 355990 / Items Less Than \$5,000,000

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	1.720	4.753	9.164	-	9.164	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	1.720	4.753	9.164	-	9.164	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	1.720	4.753	9.164	-	9.164	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

-The FY2022 funding request was reduced by \$3.381m to account for the availability of prior year execution balances.

This category includes various munitions items to support air base ground defense, air rescue and aircrew/ground training.

The Air Force procures munitions to maintain appropriate quantities in the War Reserve Materie (WRM) munitions and test and training stockpiles. Active, Guard and Reserve components draw from the WRM stockpiles as required and receive test and training allocations annually based on current-year requirements.

All items have an annual procurement value of less than 5 million and are code A.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

PEs associated with this P-1 Line are 0207580F and 0207599F.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 15: Other Items **P-1 Line Item Number / Title:** 355990 / Items Less Than \$5,000,000

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)					
P-40a	Items Less Than \$5,000,000				- / -	- / 1.720	- / 4.753	- / 9.164	- / -	- / 9.164
P-40	Total Gross/Weapon System Cost				- / -	- / 1.720	- / 4.753	- / 9.164	- / -	- / 9.164

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY2022 purchases miscellaneous munitions such as hand grenades, grenades with colored smoke for signaling aircrews and air-rescue, and ground-burst simulators primarily used for air-base and ground support missions.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 15 **P-1 Line Item Number / Title:** 355990 / Items Less Than \$5,000,000 **Aggregated Items Title:** Items Less Than \$5,000,000

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
IMEA	A		-	-	-	-	-	-	-	-	-	-	-	4.475	-	-	-	-	-	4.475
(J007) Claymore	A		-	-	-	-	-	-	-	-	-	0.001	4,471	4.002	-	-	-	0.001	4,471	4.002
(HB25) LAW Rockets	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(YW33) Smokey Sams	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(G870) FZE HAND GRN PRACTICE	A		-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-
(G878) FUZE, GRENADE HAND, PRAC	A		-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-
(G881) GRN, HAND PRAC M228	A		-	-	-	0.000	4,179	0.200	-	-	-	-	-	-	-	-	-	-	-	-
(G940) GRENADE, SMOKE, GREEN M18	A		-	-	-	0.000	4,319	0.273	-	-	0.450	-	-	-	-	-	-	-	-	-
(G945) GRENADE, SMOKE, YELLOW	A		-	-	-	0.000	2,259	0.150	-	-	0.150	-	-	-	-	-	-	-	-	-
(G950) GRENADE, SMOKE, RED	A		-	-	-	0.000	4,851	0.337	-	-	0.400	-	-	-	-	-	-	-	-	-
(G955) GRENADE, SMOKE, VIOLET M18	A		-	-	-	0.000	5,072	0.348	-	-	1.500	-	-	-	-	-	-	-	-	-
(GG04) GRENADE, NON-LETHAL MODEL 9590	A		-	-	-	0.000	747	0.025	-	-	0.199	-	-	-	-	-	-	-	-	-
(G982) GRENADE, HAND, SMOKE, M83	A		-	-	-	0.000	665	0.020	-	-	-	-	-	-	-	-	-	-	-	-
(GG09) GRENADE, HAND NON-LETHAL	A		-	-	-	-	-	0.000	-	-	0.750	-	-	-	-	-	-	-	-	-
(KM02) PEPPER SPRAY, POCKET	A		-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-
(L594) SIMULATOR, GROUND BURST M115A2	A		-	-	-	0.000	4,785	0.125	-	-	-	-	-	-	-	-	-	-	-	-
(L601) SIMULATOR, HAND GRENADE M116A1	A		-	-	-	0.000	10,808	0.241	-	-	0.250	-	-	-	-	-	-	-	-	-
SIMULATOR BOOBY TRAP M117	A		-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-
(GG36) GRENADE, MK20 FLASH NONLETHAL	A		-	-	-	-	-	0.000	-	-	0.421	-	-	-	-	-	-	-	-	-
(LA51) SIMULATOR, SMALL ARMS FIRE	A		-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-
(LA52) SIMULATOR, SMALL ARMS FIRE	A		-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 15	P-1 Line Item Number / Title: 355990 / Items Less Than \$5,000,000	Aggregated Items Title: Items Less Than \$5,000,000
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
NUCLEAR TRAINERS	A		-	-	-	-	-	0.000	-	-	0.633	0.000	687,000	0.687	-	-	-	0.000	687,000	0.687
ALE 50	A		-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Uncategorized			-	-	-	-	-	1.720	-	-	4.753	-	-	9.164	-	-	-	-	-	9.164
Total			-	-	-	-	-	1.720	-	-	4.753	-	-	9.164	-	-	-	-	-	9.164

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 16: Flares **P-1 Line Item Number / Title:** 356010 / Flares

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	139.388	61.259	95.297	-	95.297	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	139.388	61.259	95.297	-	95.297	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	139.388	61.259	95.297	-	95.297	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

- FY2020 funding totals include \$103.272M appropriated for Overseas Contingency Operations.
- FY2021 funding totals include \$21.171M appropriated for Overseas Contingency Operations.
- FY2022 funding totals include \$18.578M requested for Direct War and/or Enduring Requirements.

The following Weapon System Cost Elements are represented in this P-1 line:

- (L410) M206 Flare is an infrared countermeasures flare used by A-10, F-16, C-17, C-130, and other aircraft against heat seeking missiles. This item is procured through the Single Manager for Conventional Ammunition (SMCA)/Army. The M206 is being replaced by the MJU-61 in FY24.
- (L461) MJU-10 flare, which has been used primarily by the F-15 aircraft against heat seeking missiles, was partially replaced in FY18 by the MJU-53/B and will be completely replaced in FY20. The MJU-53/B is procured by the USAF.
- (L462) MJU-23 Infrared Countermeasure Flare used on the B-1B aircraft against heat seeking missiles. The MJU-23 flare includes a specially designed high ejection cartridge (BBU-46) that propels the burning flare pellet upward with sufficient velocity to clear the aircraft during high speed, low level flight. Currently there is no planned procurement thru the FYDP for the MU-23.
- (L463) MJU-7 IR Flare is an infrared countermeasures flare applicable to the A-10, F-15, F-16, F-22 and other aircraft. It creates an infrared signature and acts as a decoy against heat seeking missiles. Will be replaced by MJU-53 in 2020. The Air Force transitioned in FY18 to MJU-53 for wartime and other operational uses; MJU-7 is currently used only for training. This item is procured through the Single Manager for Conventional Ammunition (SMCA)/Army.
- (L225) Red/Red star M37A2 Signal.
- (LA21) MJU-53/B Flare is a magnesium base IR countermeasure. It consists of an aluminum case, crimped and sealed plastic end cap, rubber spacer, plastic piston, safe and ignition device, flare pellet and sealed cartridge cup. It is dispensed and ignited in flight by a BBU-36 impulse cartridge cup. Used on C-17, C-5 aircraft. This item is procured through USAF. The MJU-53 will be replaced by the MJU-75 in FY24.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 16: Flares		P-1 Line Item Number / Title: 356010 / Flares
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>-(LA36) MJU-62 Flare is a multi-spectral countermeasure designed to be used as part of a flare cocktail pattern to confuse advanced infrared threat missiles. Used primarily on the C-17 and C-5 aircraft which require a 1 inch by 2 inch by 8 inch flare size to accommodate desired cocktail flare mixes. MJU-62 is being evaluated for use on other types of aircraft such as F-16, A-10 and HH-60. This item is procured through USAF.</p> <p>-(LA61) MJU-66 decoy Countermeasure Flare is an improved version of the MJU-64 providing increased decoy effectiveness and protection for the A-10, C-130 aircraft as well as HH-53 and HH-60 helicopters and is being evaluated for other aircraft. It is a one-piece aluminum case containing a payload of advanced special material elements, loaded into a multiple jettison unit magazine installed on a countermeasure dispenser. When deployed into the air stream, the special material reacts to emit an infrared signal to decoy infrared seeking missiles. This item is procured through Navy PMA-272.</p> <p>-(LA66) MJU-61 is an infrared countermeasure flare used by F-35 aircraft against heat seeking missiles. The MJU-61 will replace the M206 in FY24 and will be used on multiple aircraft. This item is procured through the Navy PMA-272.</p> <p>-(LA67) MJU-71 IR Flare is a magnesium based thrusted flare used in a cocktail mix of flares on aircraft to improve the effectiveness of the countermeasures against heat-seeking missile threats. The 1x1x8 inch size provides better protection of the aircraft and flight crew. Other versions of thrusted flares are larger and use more space in the flare dispensers, severely limiting the number of ejection events. Initially approved for use on the C-130, A-10 and F-16 aircraft with on-going tests for use on other platforms. This item is procured through the Navy. MJU-71 will be replaced by the MJU-76.</p> <p>-(LA68) MJU-68 Flare is a magnesium based countermeasure and was developed specifically for and only used on the F-35/JSF aircraft to provide protection from advanced infrared threat missiles. This item is used for combat only. This item is procured through Navy PMA-272.</p> <p>-(LA76) MJU-73 is a spectral flare that is used in a cocktail mix of 1 for 1 with the M219 flare to increase protection against heat-seeking missile threats. This 1x1x8 inch sized flare is primarily used on the HH-60, and is expected to be qualified on several fixed-wing aircraft in the near future. This item is procured through the US Air Force.</p> <p>-(LA78) XM219 is a bundled flare that is used in a cocktail mix of 1 for 1 with the M219 flare to increase protection against heat-seeking missile threats. This 1x1x8 inch sized flare provides a unique dispensing pattern and is primarily used on the HH-60. This item is procured by the US Army/SOCOM.</p> <p>-(LA84) MJU-52A/B Decoy is an infrared countermeasure decoy used by F-15 aircraft against heat seeking missiles. This item is procured through USAF and is sole source to Alloy Surfaces. It is an unique form factor mechanically dispensed from a BOL dispenser.</p> <p>-(LA85) MJU-75 Flare is a magnesium base IR countermeasure. It consists of an aluminum case, crimped and sealed plastic end cap, rubber spacer, plastic piston, safe and ignition device, flare pellet and sealed cartridge cup. It is dispensed and ignited in flight by a BBU-35 impulse cartridge. Used on C-17, C-5, and being evaluated for future use on other aircraft such as A-10 and F-16. The MJU-75 will replace the MJU-53, which is also replacing the MJU-10 and MJU-7. This item is procured through USAF.</p> <p>-(LA88) MJU-76 Flare is a thrusted magnesium base IR countermeasure. It consists of a 1x1 aluminum case, crimped and sealed plastic end cap, compression pad, safe and ignition device with sealing O-ring, finned aluminum flight body containing the flare grain with a molded PEEK nozzle and a weighted nose. The case uses a sealed cartridge cup and the flare is dispensed and ignited in flight by a BBU-35 or CCU-145 impulse cartridge. Used on C-17, C-130, and being evaluated for future use on other aircraft such as A-10, F-16, and F-35. MJU-76 will replace the MJU-71.</p> <p>-(L580) MK-58 is a marine location marker consisting of an aluminum body containing two pyrotechnic candles of a red phosphorus composition. The ignition end of the marker has three holes, two for smoke and flame emission and one for water to enter the MK72 Mod 1 seawater-activated battery. Adhesive foil discs hermetically seal the two emission holes. A reinforced adhesive foil strip with a rectangular pull ring hermetically seals the battery. The adhesive foil seals are protected during handling and shipping by a replaceable polyethylene protective cover. MK-58 is procured through Navy Crane.</p> <p>-(LY12) ALA-17C is an infrared countermeasure used by B-52 aircraft against heat seeking missiles. This item is procured through the US Air Force Global Strike Command and is currently upgrading to the ALE-47 dispenser system which may eliminate the ALA-17 and provide the ability to use common flares.</p> <p>-Items Less Than Five Million Dollars: All items have an annual procurement of less than 5,000,000 and are Code A.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 16: Flares		P-1 Line Item Number / Title: 356010 / Flares
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		

These funds may also procure inventoried items which may not be procured on an annual basis and could be required on an emerging basis. Variations to cover critical shortfalls to inventory objectives as well as actual and planned expenditures will be addressed during execution year.

Funds may be used to address production Diminishing Manufacturing Resources (DMS)/Material Shortages/Obsolescence issues through studies, bridge buys, life of type buys, supplier/parts replacement, to include electronic components used commercially and in short supply; and, qualification activities to preserve future production capabilities and capacities.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

This program element may include necessary test or evaluation equipment required to assess Advanced Infrared Countermeasure weapons system capabilities.

Funding for this exhibit contained in PEs: 0208030F and 0207599F.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 16: Flares **P-1 Line Item Number / Title:** 356010 / Flares

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	(L410) M206 FLARE				- / -	- / 20.802	- / 7.250	- / -	- / -	- / -
P-40a	(L463) MJU-7A/B, IR FLARE				- / -	- / 8.000	- / -	- / -	- / -	- / -
P-40a	(L580) MK-58				- / -	- / 3.000	- / -	- / 0.750	- / -	- / 0.750
P-40a	(LA21) MJU-53/B IR CM FLARE				- / -	- / 36.692	- / 1.760	- / -	- / -	- / -
P-40a	(LA36) MJU-62/B IR CM FLARE				- / -	- / 3.807	- / 6.218	- / 1.500	- / -	- / 1.500
P-40a	(LA61) MJU-66 CM ACFT FLARE				- / -	- / 19.000	- / 2.880	- / 4.750	- / -	- / 4.750
P-40a	(LA66) MJU-61 IR CM FLARE				- / -	- / 7.912	- / 7.500	- / 27.000	- / -	- / 27.000
P-40a	(LA68) MJU-68/B IR CM FLARE				- / -	- / 11.401	- / -	- / -	- / -	- / -
P-40a	(LA76) MJU-73 MTRV FLARE				- / -	- / 4.184	- / 3.936	- / 1.500	- / -	- / 1.500
P-40a	(LA84) MJU-52 BOL/IR FLARE				- / -	- / -	- / -	- / 1.700	- / -	- / 1.700
P-40a	(LA85) MJU-75 Flare				- / -	- / 8.996	- / 19.965	- / 41.169	- / -	- / 41.169
P-40a	(LA88) MJU-76 Flare				- / -	- / 9.717	- / 8.000	- / 14.000	- / -	- / 14.000
P-40a	Flares (Items less than 5 Million)				- / -	- / 5.877	- / 3.750	- / 2.928	- / -	- / 2.928
P-40	Total Gross/Weapon System Cost				- / -	- / 139.388	- / 61.259	- / 95.297	- / -	- / 95.297

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.
 Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY2022 funds purchase countermeasures and flares used by A-10, AC-130, F-15, F-16, C-5, C-17 and F-35/JSF aircraft, HH-53 and HH-60 helicopters and other aircraft to protect the warfighter against advanced air-to-air and ground-to-air infrared and heat seeking attack weapon systems and missiles. FY2022 funding totals include \$18.578M requested for Direct War and/or Enduring Requirements.

The Air Force procures munitions to maintain appropriate quantities in the War Reserve Materiel (WRM) Munitions and test and training stockpiles. Active, Guard and Reserve components draw from the WRM stockpiles as required and receive test and training allocations annually based on current-year requirements.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 16	P-1 Line Item Number / Title: 356010 / Flares	Aggregated Items Title: (L410) M206 FLARE
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
M206 FLARE - L410	A		-	-	-	0.000	522,198	20.214	0.000	179,144	7.250	-	-	-	-	-	-	-	-	-
PRODUCTION ENGINEERING	A		-	-	-	-	-	0.585	-	-	-	-	-	-	-	-	-	-	-	-
QUALITY ASSURANCE	A		-	-	-	-	-	0.003	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Uncategorized			-	-	-	-	-	20.802	-	-	7.250	-	-	-	-	-	-	-	-	-
Total			-	-	-	-	-	20.802	-	-	7.250	-	-	-	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:

The Single Manager for Conventional Ammunition (SMCA), Department of Army provides this cost analysis with estimates obtained from industry based on quantity range matrices and forecasted cost of materials.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 16	P-1 Line Item Number / Title: 356010 / Flares	Aggregated Items Title: (L463) MJU-7A/B, IR FLARE
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
MJU-7A/B IR FLARE - L463	A		-	-	-	0.000	139,956	8.000	-	-	-	-	-	-	-	-	-	-	-	-
QUALITY ASSURANCE	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Uncategorized			-	-	-	-	-	8.000	-	-	-	-	-	-	-	-	-	-	-	-
Total			-	-	-	-	-	8.000	-	-	-	-	-	-	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:

The Single Manager for Conventional Ammunition (SMCA), Department of Army provides this cost analysis with estimates obtained from industry based on quantity range matrices and forecasted cost of materials.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 16	P-1 Line Item Number / Title: 356010 / Flares	Aggregated Items Title: (L580) MK-58
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
MK-58 (L580)	A		-	-	-	0.000	7,712	3.000	-	-	-	0.000	1,890	0.750	-	-	-	0.000	1,890	0.750
Subtotal: Uncategorized			-	-	-	-	-	3.000	-	-	-	-	-	0.750	-	-	-	-	-	0.750
Total			-	-	-	-	-	3.000	-	-	-	-	-	0.750	-	-	-	-	-	0.750

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 16 **P-1 Line Item Number / Title:** 356010 / Flares **Aggregated Items Title:** (LA21) MJU-53/B IR CM FLARE

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
UNCATEGORIZED																				
(LA21) MJU-53/B INFRARED COUNTERMEASURE FLARE	A		-	-	-	0.000	310,948	36.692	0.000	14,768	1.760	-	-	-	-	-	-	-	-	-
Subtotal: UNCATEGORIZED			-	-	-	-	-	36.692	-	-	1.760	-	-	-	-	-	-	-	-	-
Total			-	-	-	-	-	36.692	-	-	1.760	-	-	-	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:

The MJU-53 Infrared Countermeasure Flare is procured by the Munitions Division, AFMC. Unit prices are estimates from industry.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 16	P-1 Line Item Number / Title: 356010 / Flares	Aggregated Items Title: (LA36) MJU-62/B IR CM FLARE
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
(LA36) MJU-62 IR CM FLARE	A		-	-	-	0.000	14,930	3.807	0.000	24,383	6.218	0.000	5,882	1.500	-	-	-	0.000	5,882	1.500
Subtotal: Uncategorized			-	-	-	-	-	3.807	-	-	6.218	-	-	1.500	-	-	-	-	-	1.500
Total			-	-	-	-	-	3.807	-	-	6.218	-	-	1.500	-	-	-	-	-	1.500

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:

The MJU-62 Infrared Countermeasure Flare is procured by the Munitions Division, AFMC. Unit prices are estimates from industry.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 16	P-1 Line Item Number / Title: 356010 / Flares	Aggregated Items Title: (LA61) MJU-66 CM ACFT FLARE
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
(LA61) MJU-66 Decoy ACFT Flare	A		-	-	-	0.000	172,446	19.000	0.000	25,880	2.880	0.000	42,262	4.750	-	-	-	0.000	42,262	4.750
Subtotal: Uncategorized			-	-	-	-	-	19.000	-	-	2.880	-	-	4.750	-	-	-	-	-	4.750
Total			-	-	-	-	-	19.000	-	-	2.880	-	-	4.750	-	-	-	-	-	4.750

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:

The MJU-66 Decoy is procured through Navy PMA-272. The cost analysis is provided to the Navy with estimates obtained from industry based on quantity range matrices and forecasted cost of materials.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 16	P-1 Line Item Number / Title: 356010 / Flares	Aggregated Items Title: (LA66) MJU-61 IR CM FLARE
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
(LA66) MJU-61 IR CM Flare	A		-	-	-	0.000	113,139	7.912	0.000	106,188	7.500	0.000	378,493	27.000	-	-	-	0.000	378,493	27.000
Subtotal: Uncategorized			-	-	-	-	-	7.912	-	-	7.500	-	-	27.000	-	-	-	-	-	27.000
Total			-	-	-	-	-	7.912	-	-	7.500	-	-	27.000	-	-	-	-	-	27.000

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 16	P-1 Line Item Number / Title: 356010 / Flares	Aggregated Items Title: (LA68) MJU-68/B IR CM FLARE
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
(LA68) MJU-68 IR CM FLARE	A		-	-	-	0.002	5,589	11.401	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: Uncategorized			-	-	-	-	-	11.401	-	-	-	-	-	-	-	-	-	-	-	
Total			-	-	-	-	-	11.401	-	-	-	-	-	-	-	-	-	-	-	

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:
The MJU-68 Infrared Countermeasure Flare is procured by the Navy. Unit prices are estimates from industry.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 16	P-1 Line Item Number / Title: 356010 / Flares	Aggregated Items Title: (LA76) MJU-73 MTVR FLARE
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
(LA76) MJU-73 MTVR FLARE	A		-	-	-	0.001	5,900	4.184	0.001	5,550	3.936	0.001	2,115	1.500	-	-	-	0.001	2,115	1.500
Subtotal: Uncategorized			-	-	-	-	-	4.184	-	-	3.936	-	-	1.500	-	-	-	-	-	1.500
Total			-	-	-	-	-	4.184	-	-	3.936	-	-	1.500	-	-	-	-	-	1.500

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 16	P-1 Line Item Number / Title: 356010 / Flares	Aggregated Items Title: (LA84) MJU-52 BOL/IR FLARE
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
MJU-52 BOL/IR FLARE	A		-	-	-	-	-	-	-	-	-	0.001	2,083	1.700	-	-	-	0.001	2,083	1.700
Subtotal: Uncategorized			-	-	-	-	-	-	-	-	-	-	-	1.700	-	-	-	-	-	1.700
Total			-	-	-	-	-	-	-	-	-	-	-	1.700	-	-	-	-	-	1.700

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 16	P-1 Line Item Number / Title: 356010 / Flares	Aggregated Items Title: (LA85) MJU-75 Flare
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
MJU-75 (LA85)	A		-	-	-	0.001	11,245	8.996	0.002	12,624	19.965	0.001	50,447	41.169	-	-	-	0.001	50,447	41.169
Subtotal: Uncategorized			-	-	-	-	-	8.996	-	-	19.965	-	-	41.169	-	-	-	-	-	41.169
Total			-	-	-	-	-	8.996	-	-	19.965	-	-	41.169	-	-	-	-	-	41.169

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 16	P-1 Line Item Number / Title: 356010 / Flares	Aggregated Items Title: (LA88) MJU-76 Flare
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
MJU-76 (LA88)	A		-	-	-	0.001	12,147	9.717	0.001	9,901	8.000	0.001	17,155	14.000	-	-	-	0.001	17,155	14.000
Subtotal: Uncategorized			-	-	-	-	-	9.717	-	-	8.000	-	-	14.000	-	-	-	-	-	14.000
Total			-	-	-	-	-	9.717	-	-	8.000	-	-	14.000	-	-	-	-	-	14.000

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 16	P-1 Line Item Number / Title: 356010 / Flares	Aggregated Items Title: Flares (Items less than 5 Million)
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Uncategorized																				
Items Less than 5M	A		-	-	-	0.001	5,877	5,877	0.001	3,750	3,750	0.001	2,928	2,928	-	-	-	0.001	2,928	2,928
Subtotal: Uncategorized			-	-	-	-	-	5,877	-	-	3,750	-	-	2,928	-	-	-	-	-	2,928
Total			-	-	-	-	-	5,877	-	-	3,750	-	-	2,928	-	-	-	-	-	2,928

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 18: Fuzes **P-1 Line Item Number / Title:** 356120 / FUZES

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	144.214	102.918	50.795	-	50.795	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	144.214	102.918	50.795	-	50.795	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	144.214	102.918	50.795	-	50.795	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

- FY2020 funding total includes \$152.480M appropriated for Overseas Contingency Operations, which includes a \$49.679M FY21 Appropriation Act rescission.
- FY2021 funding totals include \$91.017M appropriated for Overseas Contingency Operations, which reflects a \$16.838M reduction in the FY21 Appropriation Act.
- FY2022 funding totals include \$34.970 requested for Direct War and/or Enduring Requirements.
- FY2022 funding request was reduced by \$177.305M to account for the availability of prior year execution balances.

Procure advanced fuze/sensor systems and modernization capabilities required by US and Allied warfighters to support the commander's intent. These fuze/sensor systems provide the DoD with reliable and effective weapon safing, arming, sensing, and attack capabilities. Characterize how fuzing impacts the survivability, producibility, and lethality of various weapon systems; including internal pressures, warhead effects, and ignition characteristics.

The following Weapon System Cost Elements are represented in this P-1 line:

- FMU-152A/B Joint Programmable Fuze (JPF) (EC11) is a multi-function unitary fuze developed and procured for the Joint Direct Attack Munition and other conventional inventory weapons. The FMU-152A/B provides a highly reliable bomb fuze with multiple arm times, instantaneous and multiple short and long delay detonation times, hard target survivability, cockpit programmability, and increased service/shelf life. The JPF is compatible with MK-80 series guided and unguided bombs. It has replaced and/or supplemented the FMU-139A/B and FMU-139C/B, FMU-143, and M904/M905 fuzes, and provides fuzing capability for hard target, general purpose, and guided bombs. The Air Force is the lead service for procurement/sustainment.

- FMU-139D/B is a Navy-led general purpose fuze Engineering Change Proposal (ECP) program to replace the FMU-139C/B and FMU-152A/B in the USN and USAF inventories. This effort is a low cost option that meets both service requirements for a better buying power business case. USAF production buy decision for lot 2 was approved September 2019 with production deliveries beginning 1QFY22. The USAF & USN continue to monitor weapon usage rates in the AOR and as such have adjusted inventory ordering levels from 40,650 to as little as 20,000 per lot. Manufacturing line capacity remains at 50,000 per year, providing a delta of at least 30,000 units that could be available for FMS or other domestic requirements. The original contract for this effort was competitively awarded by the Navy on 17 September 2015.

- DSU-33D/B Proximity Sensor (KY70) is a battery operated, RF, Doppler radar proximity sensor. It is used to provide low altitude proximity function to the bomb fuze. The sensor interfaces with FMU-139 and FMU-152 fuzes. This line item includes existing sensor production, Engineering Change Proposals (ECPs), and product improvement efforts, for example, modifications to eliminate obsolescence. DSU-33D/B will be replaced by Cockpit Selectable Height-of-Burst Sensor (C-HOBS; DSU-43) because of obsolescence issues. The contract was awarded to L3 Technologies in March 2019. Final contract closed 31 Mar 2021 with no future procurements.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 18: Fuzes		P-1 Line Item Number / Title: 356120 / FUZES
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		

- FMU-167 Hard Target Void Sensing Fuze (HTVSF) (EE27), is an advanced system designed to provide fuzing and void sensing functions, enabling a weapon to penetrate and destroy hardened, deeply buried targets protected by multiple layers of soil and/or reinforced concrete. The HTVSF provides for in-flight cockpit programmability, safing and arming, multi-function (time delay and void sensing) and multi-delay arming capabilities. USAF and USN will employ HTVSF in penetrator warheads, contributing to the ability to strike and functionally defeat high value/high payoff targets in order to achieve strategic and operational objectives. HTVSF completed MS-C in May FY 2015 & Low-Rate Initial Production (LRIP) was awarded in July 2015. LRIP II was awarded in September 2016 and Full Rate Production was awarded in September 2017. FRP 2 & 3 awarded in October 2019. Inventory Objective increases may necessitate additional sustainment acquisition. The Air Force is the lead service for procurement/sustainment.

- DSU-43/B Cockpit Selectable Height-of-Burst Sensor (C-HOBS) is a sensor that replaces the current DSU-33D/B proximity sensor. C-HOBS eliminates two obsolescence issues the DSU-33D/B is currently experiencing and will replace the single factory height-of-burst setting with the addition of multiple height-of-burst options selectable via both manual switches and a cockpit interface. These selection options allow flexibility during flight to address a wide array of targets. The C-HOBS is intended to interface with and provide a cockpit-selectable proximity function to general and special purpose weapons, to include Next Generation Attack Weapons (NGAAWs). EMD contract awarded March 2019. MS-C and LRIP are on track to award 3QFY21.

- Items Less Than Five Million Dollars: Various fuzes, to include inert training items, that have an annual procurement value of less than \$5,000,000 and are code A.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), these items are necessary for use by the active components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

Funding may be used to address Diminishing Manufacturing Sources (DMS)/Material Shortages/Obsolescence issues.

Funding for this exhibit contained in PEs: 0208030F and 0207599F.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 01: Ammunition / BSA 18: Fuzes **P-1 Line Item Number / Title:** 356120 / FUZES

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)					
P-5	C-HOBS		A		- / -	- / -	4,500 / 27.000	10,000 / 39.598	- / -	10,000 / 39.598
P-5	FMU-139D/B		A		- / -	40,650 / 102.612	29,013 / 75.918	4,650 / 11.197	- / -	4,650 / 11.197
P-5	(EE27) FMU-167 HTVSF		A		- / -	3,000 / 41.602	- / -	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost				- / -	- / 144.214	- / 102.918	- / 50.795	- / -	- / 50.795

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY22 funding purchases fuzes and associated items. FY2022 funding totals include \$34.970 requested for Direct War and/or Enduring Requirements.

The Air Force procures munitions to maintain appropriate quantities in the War Reserve Materiel (WRM) Munitions and test and training stockpiles. Active, Guard and Reserve components draw from the WRM stockpiles as required and receive test and training allocations annually based on current-year requirements.

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Exhibit P-5, Cost Analysis: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 18	P-1 Line Item Number / Title: 356120 / FUZES	Item Number / Title [DODIC]: C-HOBS

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)	-	-	4,500	10,000	-	10,000
Gross/Weapon System Cost (\$ in Millions)	-	-	27.000	39.598	-	39.598
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	-	27.000	39.598	-	39.598
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	-	27.000	39.598	-	39.598

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	0.006	0.004	-	0.004

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - Hardware End Item Cost Cost																		
Recurring Cost																		
C-HOBS	-	-	-	-	-	-	0.006	4,500	24.810	0.004	10,000	37.648	-	-	-	0.004	10,000	37.648
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	24.810	-	-	37.648	-	-	-	-	-	37.648
<i>Subtotal: Hardware - Hardware End Item Cost Cost</i>	-	-	-	-	-	-	-	-	24.810	-	-	37.648	-	-	-	-	-	37.648
Support - Support Cost																		
PMA Other Government Costs	-	-	-	-	-	-	-	-	2.190	-	-	1.950	-	-	-	-	-	1.950
<i>Subtotal: Support - Support Cost</i>	-	-	-	-	-	-	-	-	2.190	-	-	1.950	-	-	-	-	-	1.950
Gross/Weapon System Cost	-	-	-	-	-	-	0.006	4,500	27.000	0.004	10,000	39.598	-	-	-	0.004	10,000	39.598

Remarks:

Milestone C decision and LRIP are on track to award 3QFY21.

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Exhibit P-5, Cost Analysis: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 18	P-1 Line Item Number / Title: 356120 / FUZES	Item Number / Title [DODIC]: FMU-139D/B

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)	-	40,650	29,013	4,650	-	4,650
Gross/Weapon System Cost (\$ in Millions)	-	102.612	75.918	11.197	-	11.197
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	102.612	75.918	11.197	-	11.197
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	102.612	75.918	11.197	-	11.197

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	0.003	0.003	0.002	-	0.002

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - Hardware End Item Cost Cost																		
Recurring Cost																		
FMU-139 D/B Fuzes	-	-	-	0.002	40,650	92.763	0.002	29,013	66.207	0.002	4,650	9.297	-	-	-	0.002	4,650	9.297
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	92.763	-	-	66.207	-	-	9.297	-	-	-	-	-	9.297
<i>Subtotal: Hardware - Hardware End Item Cost Cost</i>	-	-	-	-	-	92.763	-	-	66.207	-	-	9.297	-	-	-	-	-	9.297
Support - FMU-139D/B, PGM SPT, Qual Test Cost																		
PMA Other Government Costs	-	-	-	-	-	9.849	-	-	9.711	-	-	1.900	-	-	-	-	-	1.900
<i>Subtotal: Support - FMU-139D/B, PGM SPT, Qual Test Cost</i>	-	-	-	-	-	9.849	-	-	9.711	-	-	1.900	-	-	-	-	-	1.900
Gross/Weapon System Cost	-	-	-	0.003	40,650	102.612	0.003	29,013	75.918	0.002	4,650	11.197	-	-	-	0.002	4,650	11.197

Remarks:

Under the current contract price band FMU-139D/B's actual unit cost is \$2,282 per fuze. Price bands can vary based on USN and FMS purchases. Total max production capacity is 50,000 per year.

Lot 3 (FY19/20) quantity is 20,000
 Lot 4 (FY20/21) quantity is 20,000
 Lot 5 (FY21/22) quantity is 20,000*

*Lot 5 is not currently on contract, but the program office is working a follow-on contract to procure future lots.

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Exhibit P-5, Cost Analysis: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F / 01 / 18	P-1 Line Item Number / Title: 356120 / FUZES	Item Number / Title [DODIC]: (EE27) FMU-167 HTVSF

ID Code (A=Service Ready, B=Not Service Ready) : A				MDAP/MAIS Code:				
Resource Summary			Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity <i>(Units in Each)</i>			-	3,000	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>			-	41.602	-	-	-	-
Less PY Advance Procurement <i>(\$ in Millions)</i>			-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>			-	41.602	-	-	-	-
Plus CY Advance Procurement <i>(\$ in Millions)</i>			-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>			-	41.602	-	-	-	-
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>								
Initial Spares <i>(\$ in Millions)</i>			-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>			-	0.014	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - Hardware End Item Cost																		
Recurring Cost																		
Hard Target Void Sensing Fuze CLIN 1001	-	-	-	0.012	3,000	37.000	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	37.000	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - Hardware End Item Cost</i>	-	-	-	-	-	37.000	-	-	-	-	-	-	-	-	-	-	-	-
Support - Support End Item Cost																		
Program Management Administration	-	-	-	-	-	4.602	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Support End Item Cost</i>	-	-	-	-	-	4.602	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	-	0.014	3,000	41.602	-	-	-	-	-	-	-	-	-	-	-	-

Remarks:

Inventory objective for FMU-167 has increased, which will result in awarding an additional production contract.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
3011F: Procurement of Ammunition, Air Force / BA 02: Weapons / BSA 1: Small Arms

P-1 Line Item Number / Title:
357010 / Small Arms

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	43.591	20.142	12.343	-	12.343	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	43.591	20.142	12.343	-	12.343	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	43.591	20.142	12.343	-	12.343	-	-	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY21 funding totals include \$6.217M appropriated for Overseas Contingency Operations.
FY22 funding totals include \$5.775M requested for Direct War and/or Enduring Requirements.

Small Arms encompasses small caliber, hand fired weapons (pistols and rifles) used to support air base ground defense, aircrew protection, Office of Special Investigations, security functions, and other activities requiring small, portable firearms. This line also procures various accessories needed to improve or maintain existing weapons.

The M4 Carbine is a 5.56mm, gas-operated, air-cooled, magazine-fed, selective-rate, shoulder-fired weapon. It is fed by a 30-round magazine and has continued to replace select M16 series rifles. It provides the individual Airman operating in close quarters the capability to engage targets at extended ranges with accurate lethal fire. More compact than the M16 series rifle and featuring a collapsible stock, it achieves over 85% commonality with the M16A2 Rifle. The M4 carbine also includes a Combat Optic and the Modular Weapon System (MWS) which provides two additional magazines, the M4 Rail Assembly System and the Back-up Iron Sight.

The M4A1 Carbine is a 5.56mm, gas-operated, air-cooled, magazine-fed, selective-rate, shoulder-fired weapon. It is fed by a 30-round magazine and has continued to replace select M16 series rifles. It provides the individual Airman operating in close quarters the capability to engage targets at extended ranges with accurate lethal fire. More compact than the M16 series rifle and featuring a collapsible stock, it achieves over 85% commonality with the M16A2 Rifle. The M4 carbine also provides automatic fire.

The Modular Handgun System(MHS)is a DoD, non-developmental, COTS, full & open competition for a new DoD handgun to replace all M9s, M11s and Glock-19s in the inventory. The M17 and M18 are 9mm, lightweight, striker-fired semi-automatic pistols. USAF A4 has decided that the M18 will be the only version used. The USAF has determined the configuration for the new General Officer Personal Defense Weapon will also be the M18 General Officer Pistol.

PEs associated with this P-1 line are 0207227F, 0207580F, 0408011F and 0804731F.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F: Procurement of Ammunition, Air Force / BA 02: Weapons / BSA 1: Small Arms **P-1 Line Item Number / Title:** 357010 / Small Arms

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	M4 Carbine (5.56mm)		A		- / -	- / 39.120	- / -	- / -	- / -	- / -
P-40a	Modular Handgun System (MHS)				- / -	- / 0.028	- / -	- / -	- / -	- / -
P-40a	SMALL ARMS Items Less Than \$5M				- / -	- / 4.443	- / 20.142	- / 12.243	- / -	- / 12.243
P-40	Total Gross/Weapon System Cost				- / -	- / 43.591	- / 20.142	- / 12.343	- / -	- / 12.343

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY2022 funding in the amount of \$12.343M procures Optics, Suppressors, M18 and GOs and allows for annual replacement of condemned items.

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Exhibit P-5, Cost Analysis: PB 2022 Air Force	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 3011F / 02 / 1	P-1 Line Item Number / Title: 357010 / Small Arms	Item Number / Title [DODIC]: M4 Carbine (5.56mm)
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ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	-	39.120	-	-	-	-
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	-	39.120	-	-	-	-
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	-	39.120	-	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Support - Support End Item Cost																		
M4 Carbine (5.56mm)	-	-	-	-	-	22.000	-	-	-	-	-	-	-	-	-	-	-	-
IMR Blue Requirements	-	-	-	-	-	17.120	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Support End Item Cost</i>	-	-	-	-	-	39.120	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	-	-	-	39.120	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 02 / 1	P-1 Line Item Number / Title: 357010 / Small Arms	Aggregated Items Title: Modular Handgun System (MHS)
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Modular Handgun System																				
M17	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M18	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Officer's Handgun	A		-	-	-	0.000	100	0.028	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Modular Handgun System			-	-	-	-	-	0.028	-	-	-	-	-	-	-	-	-	-	-	-
Total			-	-	-	-	-	0.028	-	-	-	-	-	-	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Remarks:
The MHS is a DoD, non-developmental, COTS, full & open competition for a new DoD handgun to replace all M9s, M11s and Glock-19s in the inventory.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 3011F / 02 / 1 **P-1 Line Item Number / Title:** 357010 / Small Arms **Aggregated Items Title:** SMALL ARMS Items Less Than \$5M

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
SMALL ARMS ITEMS LESS THAN \$5 MILLION																				
Suppressors	A		-	-	-	-	-	-	-	-	0.002	900	1.440	-	-	-	0.002	900	1.440	
Optics	A		-	-	-	-	-	-	-	16.784	-	-	4.221	-	-	-	-	-	4.221	
M18 GO	A		-	-	-	-	-	-	-	0.028	-	-	0.028	-	-	-	-	-	0.028	
M18	A		-	-	-	-	-	-	-	-	-	-	0.070	-	-	-	-	-	0.070	
AN/PEQ-15 Laser Designator	A		-	-	-	-	-	0.090	-	-	-	-	0.054	-	-	-	-	-	0.054	
M2A1 (.50 Cal Machine Gun)	A		-	-	-	-	-	0.143	-	-	-	-	0.000	-	-	-	-	-	0.000	
M240B Machinegun (7.62mm)	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ballistic Sighting Module	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
M249 Automatic Rifle (5.56mm)	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
M4A1 Carbine (5.56mm - Auto)	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Modular Combat Shotgun (12 Ga)	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
M9 Pistol (9mm)	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Glock 19	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
M134 Mini Gun	A		-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MOD PROJECTS PARTS PROCUREMENT	A		-	-	-	-	-	0.250	-	-	0.230	-	-	0.220	-	-	-	-	0.220	
FIRST DESTINATION TRANSPORTATION	A		-	-	-	-	-	2.000	-	-	1.000	-	-	0.500	-	-	-	-	0.500	
PMA- OTHER GOVERNMENT COST	A		-	-	-	-	-	0.250	-	-	-	-	-	-	-	-	-	-	-	
PMA- CONTRACTOR SERVICES	A		-	-	-	-	-	1.400	-	-	1.400	-	-	1.350	-	-	-	-	1.350	
PMA-GPC	A		-	-	-	-	-	0.080	-	-	0.100	-	-	0.010	-	-	-	-	0.010	
PMA-TRAVEL	A		-	-	-	-	-	0.080	-	-	0.100	-	-	0.100	-	-	-	-	0.100	
PMA-RMIS CORPORATE TAX	A		-	-	-	-	-	0.150	-	-	0.250	-	-	0.250	-	-	-	-	0.250	
Hold for Price Adjustments	A		-	-	-	-	-	-	-	-	0.250	-	-	4.000	-	-	-	-	4.000	
Subtotal: SMALL ARMS ITEMS LESS THAN \$5 MILLION			-	-	-	-	-	4.443	-	-	20.142	-	-	12.243	-	-	-	-	12.243	
Total			-	-	-	-	-	4.443	-	-	20.142	-	-	12.243	-	-	-	-	12.243	

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2022 Air Force		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 3011F / 02 / 1	P-1 Line Item Number / Title: 357010 / Small Arms	Aggregated Items Title: SMALL ARMS Items Less Than \$5M

Remarks:
Unit costs for FY22 are estimates and subject to change.